



## **S5700 Series Ethernet Switches**

# **Hardware Description (V200)**

**Issue**      62

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# 1 About This Document





## Intended Audience


This document provides an overall description of the switch hardware, helping you obtain detailed information about each chassis, card, power module, fan module, cable, and optical module.

This document is intended for network engineers responsible for network design and deployment. You should understand your network well, including the network topology and service requirements.

## Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
	Indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.
	Indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.
	Indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.
	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance deterioration, or unanticipated results. NOTICE is used to address practices not related to personal injury.

Symbol	Description
 <b>NOTE</b>	Supplements the important information in the main text. NOTE is used to address information not related to personal injury, equipment damage, and environment deterioration.

## Command Conventions

The command conventions that may be found in this document are defined as follows.

Convention	Description
<b>Boldface</b>	The keywords of a command line are in <b>boldface</b> .
<i>Italic</i>	Command arguments are in <i>italics</i> .
[ ]	Items (keywords or arguments) in brackets [ ] are optional.
{ x   y   ... }	Optional items are grouped in braces and separated by vertical bars. One item is selected.
[ x   y   ... ]	Optional items are grouped in brackets and separated by vertical bars. One item is selected or no item is selected.
{ x   y   ... }*	Optional items are grouped in braces and separated by vertical bars. A minimum of one item or a maximum of all items can be selected.
[ x   y   ... ]*	Optional items are grouped in brackets and separated by vertical bars. Several items or no item can be selected.
&<1-n>	The parameter before the & sign can be repeated 1 to n times.
#	A line starting with the # sign is comments.

## Disclaimer

- This document is designed as a reference for you to configure your devices. Its contents, including web pages, command line input and output, are based on laboratory conditions. It provides instructions for general scenarios, but does not cover all use cases of all product models. The examples given may differ from your use case due to differences in software versions, models, and configuration files. When configuring your device, alter the configuration depending on your use case.

- The specifications provided in this document are tested in a lab environment (for example, a certain type of cards have been installed on the tested device or only one protocol is run on the device). Results may differ from the listed specifications when you attempt to obtain the maximum values due to factors such as differences in hardware configurations and carried services.
- In this document, public IP addresses may be used in feature introduction and configuration examples and are for reference only unless otherwise specified.

## Device Dimension Conventions

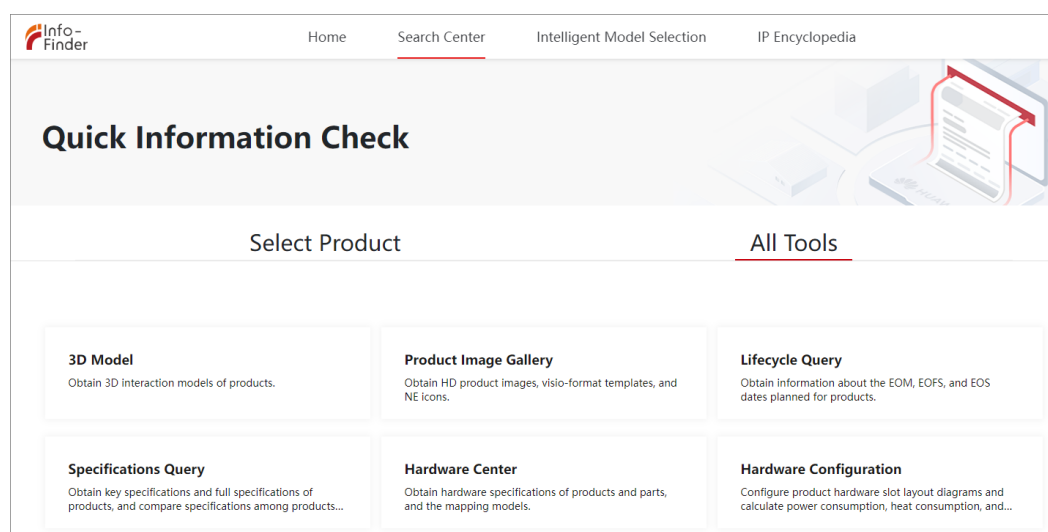
The dimensions described in this document are theoretically typical dimensions and do not include dimension tolerances.

# 2 Using the Info-Finder

**Info-Finder** is a tool platform, as shown in [Figure 2-1](#). It allows you to search for key product information by product series and model. The key product information includes basic information such as the software specifications, life cycles, and hardware information, and operation and maintenance information such as the licenses, alarms, logs, commands, and MIBs. The hardware-related tools are as follows:

- **Product Image Gallery:** provides product photos and network element icons for you to produce design drawings and networking diagrams.
- **Hardware Configuration:** automatically generates hardware configuration diagrams after you select components are required and calculates the weight, power consumption, and heat consumption.
- **Hardware Center:** provides the technical specifications of devices and components, as well as the mapping between devices, components, and versions.
- **3D Model:** provides the product images, product overview, component installation and removal video, and related component information, helping you quickly gain full product information in one-stop mode.

**Figure 2-1** Info-Finder Graphical User Interface (GUI)



 **NOTE**

The heat consumption of a device can be calculated as follows based on its power consumption:

Heat consumption (BTU/hour) = Power consumption (W) x 3.4121

# 3 Version Requirements for Components

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This document describes all the device models and modules supported in a version. To obtain accurate subscription information, visit <https://e.huawei.com> or contact Huawei local sales offices. You can also pay attention to the product change notices (PCNs) and lifecycle management bulletins on this website.

The appearances of devices and modules are subject to actually delivered products. The figures in this document are for reference only.

# 4 Chassis

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- [4.14 S5730-SI](#)
- [4.15 S5700-EI](#)
- [4.16 S5710-EI](#)
- [4.17 S5720-EI](#)
- [4.18 S5730S-EI](#)
- [4.19 S5700-HI](#)
- [4.20 S5710-HI](#)
- [4.21 S5720-HI](#)
- [4.22 S5730-HI](#)
- [4.23 S5731-L](#)



- [4.24 S5731S-L](#)
- [4.25 S5731-S](#)
- [4.26 S5731S-S](#)
- [4.27 S5731-H](#)
- [4.28 S5731S-H](#)
- [4.29 S5732-H](#)
- [4.30 S5735-L](#)
- [4.31 S5735S-L](#)
- [4.32 S5735-L1](#)
- [4.33 S5735S-L1](#)
- [4.34 S5735S-L-M](#)
- [4.35 S5735-L-I](#)
- [4.36 S5735-S](#)
- [4.37 S5735-S-I](#)
- [4.38 S5735S-S](#)
- [4.39 S5735S-H](#)
- [4.40 S5736-S](#)

## 4.1 Chassis Overview

The S series fixed Ethernet switches integrate the access and transmission functions to provide reliable access/aggregation and high-quality transmission of services on enterprise networks. The switches are built on an integrated hardware platform, and their hardware system consists of the chassis, power module, fan module, extended cards, and Switch Control Unit (SCU).

The S series fixed Ethernet switches are available in a variety of models for you to choose based on your network requirements.

The S5700 series includes the S5700-LI, S5700S-LI, S5700-LI-BAT, S5710-LI, S5720-LI, S5720S-LI, S5700-SI, S5720-SI, S5730-SI, S5720S-SI, S5720I-SI, S5700-EI, S5710-EI, S5720-EI, S5730S-EI, S5700-HI, S5710-HI, S5720-HI, S5730-HI, S5731-L, S5731S-L, S5731-S, S5731S-S, S5731-H, S5731S-H, S5732-H, S5735-L, S5735-L-I, S5735S-L, S5735S-L-M, S5735-L1, S5735S-L1, S5735-S, S5735-S-I, S5735S-H, S5736-S, and S5735S-S subseries. The S5700-LI, S5700S-LI, S5700-LI-BAT, S5710-LI, S5720-LI, S5720S-LI, S5731-L, S5731S-L, S5735-L, S5735S-L, S5735-L1, S5735S-L1, and S5735S-L-M switches are Layer 2 switches, and all the other models in this series are Layer 3 switches.

## 4.2 Naming Conventions

**Figure 4-1** S5700 switch naming conventions (applicable to S5731/S5732/S5735/S5736 models)

S5732S-H24UM4Y2CZ-MA-V2

-----

A B C D E F G H I J K L M N O P

 **NOTE**

The device name in this figure is used as an example and does not represent a specific device.

The uplink and downlink ports mentioned in this document refer to the recommended usage of the ports, and do not indicate that the corresponding ports can be used only for the downlink or uplink.

**Table 4-1** S5700 switch naming convention description (applicable to S5731/S5732/S5735/S5736 models)

Identifier	Description
A	Product type (1 character) The value is fixed at S, indicating that the device is an S series switch.
B	Role on the network (1 character) <ul style="list-style-type: none"> <li>6: aggregation switch</li> <li>5: high-end access switch</li> <li>3: mid-range access switch</li> </ul>
C	Market positioning (1 character) 7: switch for enterprise networks
D	Product sub-series (2 characters) The left character indicates the generation, for example, S5720 and S5730. The right character distinguishes different products of the same generation.
E	Industry identifier (0 to 2 characters) <ul style="list-style-type: none"> <li>By default, this field is left empty.</li> <li>S: channel distribution model</li> </ul>
F	Level type (1 character) <ul style="list-style-type: none"> <li>H: high-level</li> <li>S: standard</li> <li>L: lightweight</li> </ul>
G	Number of downlink ports (1 or 2 characters)

Identifier	Description
<b>H</b>	Downlink port type (1 or 3 characters) <ul style="list-style-type: none"><li>● <b>T</b>: GE electrical port</li><li>● <b>P</b>: GE electrical port, supporting PoE+ or PoE++</li><li>● <b>LP</b>: GE electrical port, supporting PoE+ and low PoE power</li><li>● <b>FT</b>: FE electrical port and GE electrical port</li><li>● <b>ST</b>: GE optical port and GE electrical port or combo port</li><li>● <b>U</b>: GE electrical port, supporting PoE++</li><li>● <b>N</b>: 2.5GE electrical port</li><li>● <b>UN</b>: 2.5GE electrical port, supporting PoE++</li><li>● <b>UM</b>: 10GE MultiGE electrical port, supporting PoE++</li><li>● <b>UTM</b>: 10GE MultiGE electrical port or GE electrical port, supporting PoE++</li><li>● <b>XUM</b>: 10GE MultiGE electrical port supporting PoE++ or 10GE optical port</li><li>● <b>X</b>: 10GE optical port</li><li>● <b>S</b>: GE optical port</li><li>● <b>Y</b>: 25GE optical port</li><li>● <b>HB</b>: GE or 10GE hybrid optical-electrical port</li><li>● <b>HS</b>: The switch uses independent optical ports and PoE electrical ports to implement optical-electrical hybrid</li></ul>
<b>I</b>	Number of uplink ports of type 1 (1 character)
<b>J</b>	Uplink port of type 1 (1 or 2 characters) <ul style="list-style-type: none"><li>● <b>S</b>: GE optical port</li><li>● <b>ST</b>: GE optical port and GE electrical port or combo port</li><li>● <b>UM</b>: 10GE MultiGE electrical port, supporting PoE++</li><li>● <b>X</b>: 10GE optical port</li><li>● <b>C</b>: 100GE optical port</li><li>● <b>Q</b>: 40GE optical port</li><li>● <b>Y</b>: 25GE optical port</li><li>● <b>H</b>: GE hybrid optical-electrical port</li><li>● <b>HT</b>: GE hybrid optical-electrical port and GE electrical port</li></ul>
<b>K</b>	Number of uplink ports of type 2 (1 character)

Identifier	Description
L	Uplink port of type 2 (1 or 2 characters) <ul style="list-style-type: none"> <li>• <b>S</b>: GE optical port</li> <li>• <b>ST</b>: GE optical port and GE electrical port</li> <li>• <b>UM</b>: 10GE MultiGE electrical port, supporting PoE++</li> <li>• <b>X</b>: 10GE optical port</li> <li>• <b>C</b>: 100GE optical port</li> <li>• <b>Q</b>: 40GE optical port</li> <li>• <b>Y</b>: 25GE optical port</li> <li>• <b>H</b>: GE hybrid optical-electrical port</li> <li>• <b>HT</b>: GE hybrid optical-electrical port and GE electrical port</li> </ul>
M	Function type (0 or 1 character) <ul style="list-style-type: none"> <li>• <b>Empty</b>: The switch does not support pluggable cards.</li> <li>• <b>C</b> or <b>Z</b>: The switch supports pluggable cards.</li> <li>• <b>W</b>: The switch can be installed in a duct.</li> <li>• <b>E</b>: The switch supports independent stack ports.</li> <li>• <b>N</b>: The switch can be installed on a DIN rail.</li> <li>• <b>R</b>: The switch can be installed in a rack.</li> </ul> <p><b>NOTE</b>                      The S5731-H48T4XC-B contains the <b>C</b> flag, but does not support pluggable cards.</p>
N	Special function type (0 or 1 character) <ul style="list-style-type: none"> <li>• <b>Empty</b>: By default, this field is left empty.</li> <li>• <b>I</b>: The switch supports a wide temperature range.</li> <li>• <b>M</b>: The switches are applicable to video surveillance scenarios.</li> <li>• <b>B</b>: The switch adopts the back-to-front airflow design.</li> <li>• <b>Q</b>: The switch uses natural heat dissipation.</li> <li>• <b>RU</b>: The device is a remote unit.</li> <li>• <b>T</b>: The switch supports HTM function.</li> </ul>

Identifier	Description
O	<p>Power module type (0 to 2 characters)</p> <ul style="list-style-type: none"> <li>• Empty: The switch uses pluggable power modules.</li> <li>• <b>A</b> or <b>A1</b>: <ul style="list-style-type: none"> <li>- The switch is sold with an AC power module.</li> <li>- The switch uses a built-in AC power module.</li> <li>- The switch uses a power adapter.</li> </ul> </li> <li>• <b>D</b> or <b>D1</b>: <ul style="list-style-type: none"> <li>- The switch is sold with a DC power module.</li> <li>- The switch uses a built-in DC power module.</li> </ul> </li> </ul> <p><b>NOTE</b> This convention is not applicable to the S5735-S4T2X-IA150G1, S5735-S8P2X-IA200H1, and S5735-S8P2X-IA200G1.</p>
P	<p>Version type (0 to 2 characters)</p> <ul style="list-style-type: none"> <li>• Empty: By default, this field is left empty.</li> <li>• <b>V2</b>: differentiates the models that are of the same series but use different software platforms. For example, the S5732-H and S5732-H-V2 use different software platforms.</li> <li>• <b>TV2</b>: The TV2 models use the same software platform as the V2 models and support the HTM function.</li> </ul>

**Figure 4-2** S5700 switch naming conventions (applicable to S5700/S5710/S5720/S5730 models)

**S5700S-52P-PWR-LI-24S-AC**  
 -----  
**A B C D E F G H I J K**

**NOTE**

The device name in this figure is used as an example and does not represent a specific device.

The uplink and downlink ports mentioned in this document refer to the recommended usage of the ports, and do not indicate that the corresponding ports can be used only for the downlink or uplink.

**Table 4-2** S5700 switch naming convention description (applicable to S5700/S5710/S5720/S5730 models)

Identifier	Description
A	Switch
B	<ul style="list-style-type: none"> <li>● <b>6:</b> 10GE downlink ports</li> <li>● <b>5:</b> GE downlink ports</li> <li>● <b>3:</b> Layer 3 switch with 100M downlink ports</li> <li>● <b>2:</b> Layer 2 switch with 100M downlink ports</li> </ul>
C	7: switch for enterprise networks
D	Product sub-series (such as 00 or 10)
E	<ul style="list-style-type: none"> <li>● <b>S:</b> channel distribution model</li> <li>● <b>SV2:</b> enhanced channel distribution model</li> <li>● <b>I:</b> model supporting a wide temperature range</li> </ul>
F	Maximum number of ports <b>NOTE</b> On an S5710-EI switch (such as S5710-28C-EI), this field indicates the maximum number of fixed ports on the switch.
G	Uplink port type: <ul style="list-style-type: none"> <li>● <b>C:</b> The product supports pluggable cards and its uplink ports are provided by a pluggable card or are fixed 10GE ports.</li> <li>● <b>PC:</b> The product supports pluggable cards and its uplink ports are provided by a pluggable card or are fixed GE ports.</li> <li>● <b>X:</b> The product has fixed 10GE uplink ports.</li> <li>● <b>TP:</b> The uplink ports of the product include combo ports consisting of electrical and optical ports.</li> <li>● <b>P:</b> The uplink ports of the product are fixed GE optical ports.</li> </ul> <b>NOTE</b> If the product name does not contain this field, the switch has no uplink port.
H	<ul style="list-style-type: none"> <li>● <b>PWR:</b> The product supports Power over Ethernet (PoE).</li> <li>● <b>PWH:</b> The product supports PoE++.</li> </ul> <b>NOTE</b> If the product name does not contain this field, the switch does not support PoE.
I	Level type: <ul style="list-style-type: none"> <li>● <b>LI:</b> lightweight edition</li> <li>● <b>SI:</b> standard edition</li> <li>● <b>EI:</b> enhanced edition</li> <li>● <b>HI:</b> high-end edition, which supports high-performance operation, administration, and maintenance (OAM) and built-in real-time clock (RTC)</li> </ul>

Identifier	Description
J	<p>Downlink port type:</p> <ul style="list-style-type: none"> <li>● 24S: 24 downlink SFP optical ports</li> <li>● 48CS: 48 downlink compact SFP (CSFP) optical ports</li> </ul> <p><b>NOTE</b> If the product name does not contain this field, all downlink ports of the switch are electrical ports.</p>
K	<p>Power supply type:</p> <ul style="list-style-type: none"> <li>● <b>AC or AC1</b>: switch using AC power supply</li> <li>● <b>ACF</b>: switch using AC power supply and supporting high-power PoE power modules</li> <li>● <b>ACL</b>: switch using AC power supply and having a built-in low-power PoE power module</li> <li>● <b>DC or DC1</b>: switch using DC power supply</li> <li>● <b>BAT</b>: battery LAN switch</li> </ul> <p><b>NOTE</b> Some product models that support pluggable power modules are sold with AC or DC power modules (standard configuration), and their product names contain "-AC" or "-DC". However, the silkscreen or nameplate on the chassis does not contain "-AC" or "-DC".  For example, the S5720-56C-HI supports pluggable AC and DC power modules. If its standard configuration includes AC power modules, its product name is S5720-56C-HI-AC, but the name on its silkscreen or nameplate is still S5720-56C-HI.</p>

## 4.3 Port Numbering Conventions

Physical ports are numbered in the following way:

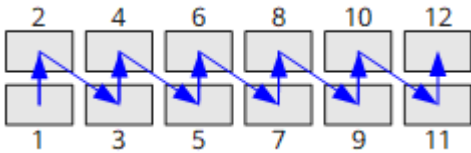
A single switch uses slot ID/subcard ID/port sequence number to identify physical ports.

- Slot ID: indicates the slot where the switch is located. The value is 0.
- Subcard ID: indicates the ID of a subcard. The default value is 0 for models without subcards.
- Port sequence number: indicates the sequence number of a port on the switch.

A stacked switch uses stack ID/subcard ID/port sequence number to identify physical ports.

- Stack ID: indicates the ID of a stacked switch. The value ranges from 0 to 8.
- Subcard ID: indicates the ID of a subcard. The default value is 0 for models without subcards.
- Port sequence number: indicates the sequence number of a port on the switch.

**Table 4-3** Port numbering conventions

Port Numbering Diagram	Description
	<p>There are two rows of service ports on the device. These ports are numbered from bottom to top and left to right, starting from 1.</p> <p>For example, the port on the top left is numbered 0/0/2.</p> <p>Ports of different speeds are numbered separately. For example, the first 100M port is numbered Ethernet 0/0/1, the first GE port is numbered GigabitEthernet 0/0/1, the first 10GE port is numbered XGigabitEthernet 0/0/1, and the first 40GE port is numbered 40GE 0/0/1. Ports with the same rate are numbered in ascending order.</p>

Some 40GE optical interfaces can be split into multiple interfaces. The converted interfaces are numbered using the following rules:

- 10GE interfaces converted from a 40GE interface are numbered based on the number of the last 10GE interface on the switch. For interfaces on the switch panel, if the last 10GE interface is numbered XGE 0/y/m and a 40GE interface to be split is numbered 40GE 0/y/n, the four 10GE interfaces converted from the 40GE interface are numbered XGE 0/y/(m + 4 \* (n - 1) + z + 1). For example, if the last 10GE interface on a switch is numbered XGE 0/0/48, the four 10GE interfaces converted from 40GE 0/0/3 are numbered XGE 0/0/57, XGE 0/0/58, XGE 0/0/59, and XGE 0/0/60. For interfaces on a card, m has a fixed value of 0. For example, the four 10GE interfaces converted from 40GE 1/1/1 on a card are numbered XGE 1/1/1, XGE 1/1/2, XGE 1/1/3, and XGE 1/1/4.
  - y: indicates the subcard number.
  - m: indicates the sequence number of the last 10GE interface on the switch.
  - n: indicates the sequence number of the 40GE interface.
  - z: indicates the interface location. The value ranges from 0 to 3.
- 25GE interfaces converted from a 100GE interface are numbered based on the number of the last 25GE interface on the switch. Because only the 100GE interfaces on cards support interface split, if a 100GE interface to be split is numbered 100GE 0/y/n, the four 25GE interfaces converted from the 100GE interface are numbered 25GE 0/y/(4 \* (n - 1) + z + 1). For example, the four 25GE interfaces converted from 100GE 0/1/1 on a card are numbered 25GE 0/1/1, 25GE 0/1/2, 25GE 0/1/3, and 25GE 0/1/4.



- y: indicates the subcard number.
- m: indicates the sequence number of the last 10GE interface on the switch.
- n: indicates the sequence number of the 40GE interface.
- z: indicates the interface location. The value ranges from 0 to 3.

 **NOTE**

Split interfaces are numbered in the same sequence as the wires of a cable are numbered. For example, in a 1-to-4 cable, the wire numbered 1 corresponds to the interface with the lowest interface number, and the wire numbered 4 corresponds to the interface with the highest interface number.

After the interface rate increases, the interface numbering rule is as follows:

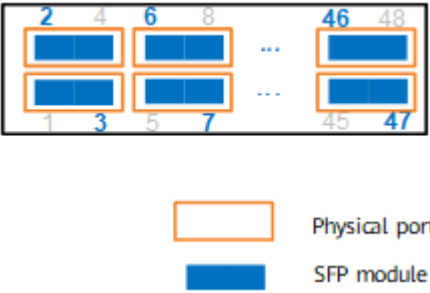
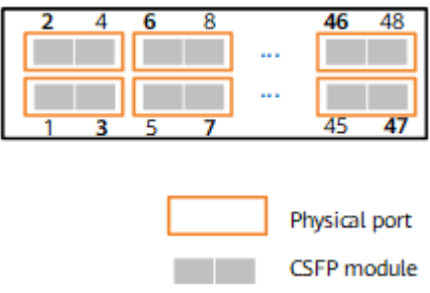
- On the S5736-S48S4X-A and S5736-S48S4X-D, the subcard ID of the 48 1000BASE-X Ethernet optical interfaces is 0, and the interface rate is increased to 10 Gbit/s after an RTU license for interface rate improvement is loaded. To prevent subcard ID conflicts, the subcard ID of the previous four 10GE SFP+ Ethernet optical interfaces is fixed at 1.
- On the S6730-H24X4Y4C, the subcard ID of the 24 10GE SFP+ Ethernet optical interfaces is 0. After an RTU license for interface rate improvement is loaded, the interface rate is increased to 25 Gbit/s, the subcard ID becomes 1, and the subcard ID of the previous four 1GE/10GE/25GE SFP28 Ethernet optical interfaces remains at 0.

 **NOTE**

For the S5731-H and S5731S-H optical-electrical hybrid models, the four 10GE optical-electrical hybrid ports and the four 10GE SFP+ Ethernet optical ports have the same sequence numbers and are distinguished by subcard ID. The subcard ID of the four 10GE optical-electrical hybrid ports is 1, the subcard ID of the four 10GE SFP+ Ethernet optical ports is 2, and the subcard ID of the rear card lost is 3.

**Table 4-4** describes the CSFP port numbering conventions.

**Table 4-4** CSFP port numbering conventions

Port Numbering Diagram	Description
 <p>Physical port</p> <p>SFP module</p>	<p>For example, an S5700-52X-LI-48CS-AC has 24 physical ports located in two rows of service ports, 12 ports in each row. When all the ports have SFP optical modules installed, the ports are numbered as follows:</p> <ul style="list-style-type: none"> <li>• The ports in the lower row are numbered starting with 3 from left to right, with an increment of 4.</li> <li>• The ports in the upper row are numbered starting with 2 from left to right, with an increment of 4.</li> </ul> <p>For example, with SFP optical modules installed, the first port at the lower left of the panel is numbered 0/0/3; the second port at the lower left is numbered 0/0/7; the first port at the upper left is numbered 0/0/2; the second port at the upper left is numbered 0/0/6.</p>
 <p>Physical port</p> <p>CSFP module</p>	<p>When all the ports have CSFP optical modules installed, each port functions as two ports. The switch has a total of 48 ports in this case. These ports are numbered starting with 1 from bottom to top, and left to right.</p> <p>For example, if a CSFP optical module is installed on the first port at the lower left, the port is split into two ports numbered 0/0/1 and 0/0/3. If a CSFP optical module is installed on the first port at the upper left, the port is split into two ports numbered 0/0/2 and 0/0/4.</p>

Port Numbering Diagram	Description
	<p>If some ports on the switch use CSFP optical modules and some use SFP optical modules, the ports are numbered following the respective numbering conventions.</p> <p>Assume that the first port at the lower left uses a CSFP optical module and the second port at the upper left uses an SFP optical module. In this case, the two ports derived from the first CSFP port are numbered 0/0/1 and 0/0/3, and the second SFP port is numbered 0/0/6.</p>

## 4.4 S5700-LI

### 4.4.1 S5700-10P-LI-AC

#### Version Mapping

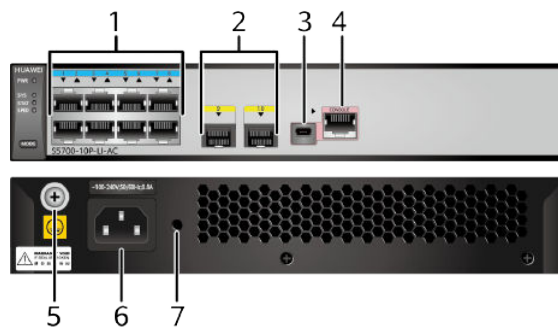
**Table 4-5** lists the mapping between the S5700-10P-LI-AC chassis and software versions.

**Table 4-5** Version mapping

Series	Model	Software Version
S5700-LI	S5700-10P-LI-AC	V200R002C00 to V200R012C00 versions <b>NOTE</b> This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

## Appearance and Structure

Figure 4-3 S5700-10P-LI-AC appearance



1	Eight 10/100/1000BASE-T ports	2	Two 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (applicable in V200R002C00 and later versions, works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>
3	One mini USB port	4	One console port
5	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	6	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .
7	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 4-6** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 4-6 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-7](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-7** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-8](#).

**Table 4-8** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

## Indicator Description

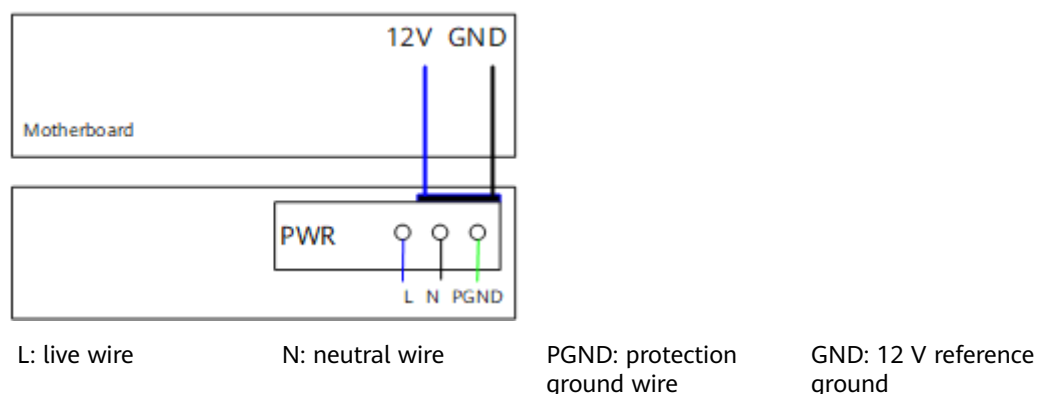
The S5700-10P-LI-AC has similar indicators to those of the S5700-28X-LI-AC, except that the S5700-10P-LI-AC does not have RPS and STCK indicators and two GE optical ports do not support the Speed mode. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5700-10P-LI-AC has a built-in power module and does not support pluggable power modules.

**Figure 4-4** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-4** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5700-10P-LI-AC has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-9** lists technical specifications of the S5700-10P-LI-AC.

**Table 4-9** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB

Item	Description
Mean time between failures (MTBF)	44.41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.8 in. x 7.1 in.)
Weight (with packaging)	1.3 kg (2.87 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	11.5 W
Typical power consumption (30% of traffic load)	9.71 W
	<ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02354036

## 4.4.2 S5700-10P-PWR-LI-AC

### Version Mapping

**Table 4-10** lists the mapping between the S5700-10P-PWR-LI-AC chassis and software versions.

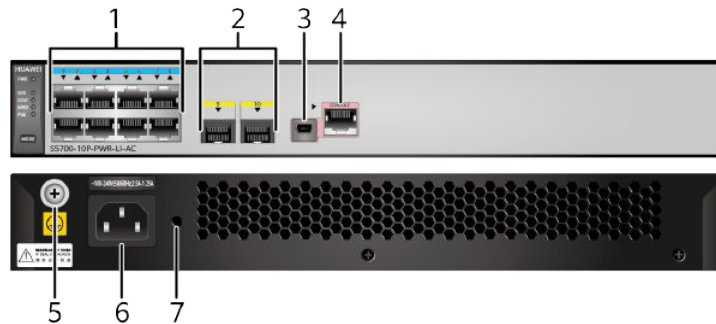
**Table 4-10** Version mapping

Series	Model	Software Version
S5700-LI	S5700-10P-PWR-LI-AC	V200R002C00 to V200R012C00 versions <b>NOTE</b> This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.



## Appearance and Structure

Figure 4-5 S5700-10P-PWR-LI-AC appearance



1	Eight PoE+ 10/100/1000BASE-T ports	2	Two 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• <b>GE optical module (80 km and 100 km modules not supported)</b></li> <li>• <b>GE copper module (applicable in V200R002C00 and later versions, works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>
3	One mini USB port	4	One console port
5	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	6	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .
7	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 4-11** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-11** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-12](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-12** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-13](#).

**Table 4-13** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### Indicator Description

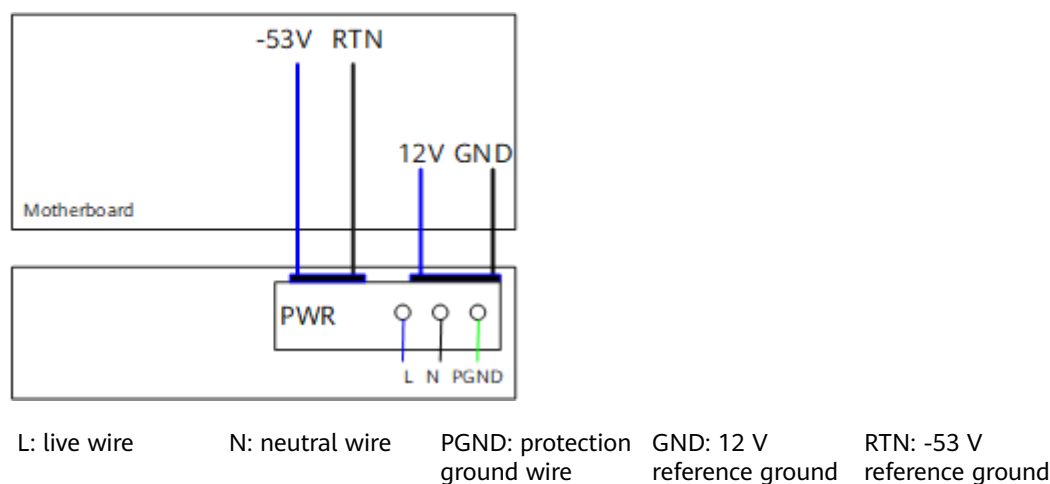
The S5700-10P-PWR-LI-AC has similar indicators to those of the S5700-28X-PWR-LI-AC, except that the S5700-10P-PWR-LI-AC does not have RPS and STCK indicators and two GE optical ports do not support the Speed mode. For details, see [Indicator Description](#).

### Power Supply Configuration

The S5700-10P-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

**Figure 4-6** shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

**Figure 4-6** Power supply by a built-in AC PoE power module



## Heat Dissipation

The S5700-10P-PWR-LI-AC has no fans and uses natural heat dissipation.

## Technical Specifications

[Table 4-14](#) lists technical specifications of the S5700-10P-PWR-LI-AC.

**Table 4-14** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	36.89 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 320.0 mm x 220.0 mm (1.72 in. x 12.6 in. x 8.7 in.)
Weight (with packaging)	2.3 kg (5.07 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full PoE)	142.4 W (system power consumption: 18.4 W, PoE: 124 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"><li>• Tested according to ATIS standard</li><li>• EEE enabled</li><li>• No PoE power consumption</li></ul>	13.51 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02354037

### 4.4.3 S5700-28P-LI-AC

#### Version Mapping

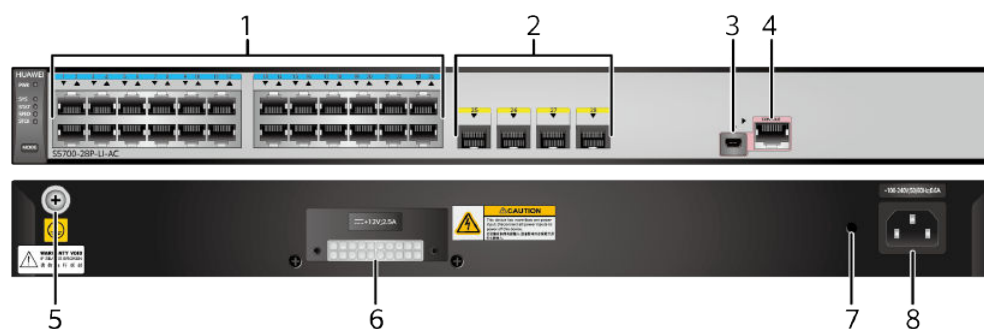
**Table 4-15** lists the mapping between the S5700-28P-LI-AC chassis and software versions.

**Table 4-15** Version mapping

Series	Model	Software Version
S5700-LI	S5700-28P-LI-AC	V200R001C00 to V200R012C00 versions  <b>NOTE</b> This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

## Appearance and Structure

**Figure 4-7** S5700-28P-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (applicable in V200R002C00 and later versions, works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only used for stack connection, applicable in V200R007C00 and later versions)</b></li> <li>• <b>1 m and 10 m SFP+ copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m AOC cables (only used for stack connection, applicable in V200R003C00 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>
3	One mini USB port	4	One console port
5	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	6	RPS socket <b>NOTE</b> It is used with an <b>RPS cable</b> , which is not hot swappable.
7	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	8	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .

## Port Description

### 10/100/1000BASE-T Ethernet Electrical Port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 4-16** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-16** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X Ethernet Optical Port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-17](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-17** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-18](#).

**Table 4-18** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)



Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### Indicator Description

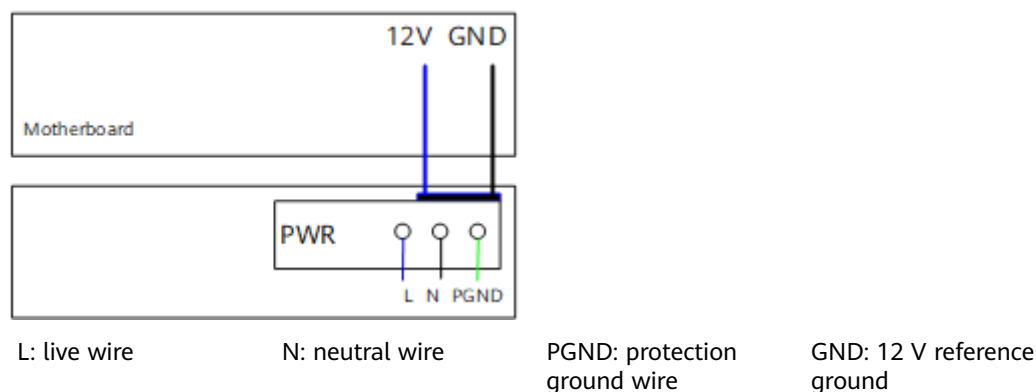
The S5700-28P-LI-AC has similar indicators to those on the S5700-28X-LI-AC, except that the S5700-28P-LI-AC does not have an RPS indicator. For details, see [Indicator Description](#).

### Power Supply Configuration

The S5700-28P-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 4-8](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-8** Power supply mode of a built-in AC power module



### Heat Dissipation

The S5700-28P-LI-AC has no fans and uses natural heat dissipation.

### Technical Specifications

[Table 4-19](#) lists specifications of the S5700-28P-LI-AC.

**Table 4-19** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none"> <li>• V200R001: 64 MB</li> <li>• V200R002 and later versions: 200 MB</li> </ul>
Mean time between failures (MTBF)	49.69 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	2.8 kg (6.17 lb)
Stack ports	<ul style="list-style-type: none"> <li>• V200R010 and earlier versions: the last two uplink 1000BASE-X optical ports</li> <li>• V200R011 and later versions: four uplink 1000BASE-X optical ports</li> </ul>
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	24 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	19.3 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02353173

## 4.4.4 S5700-28P-LI-DC

### Version Mapping

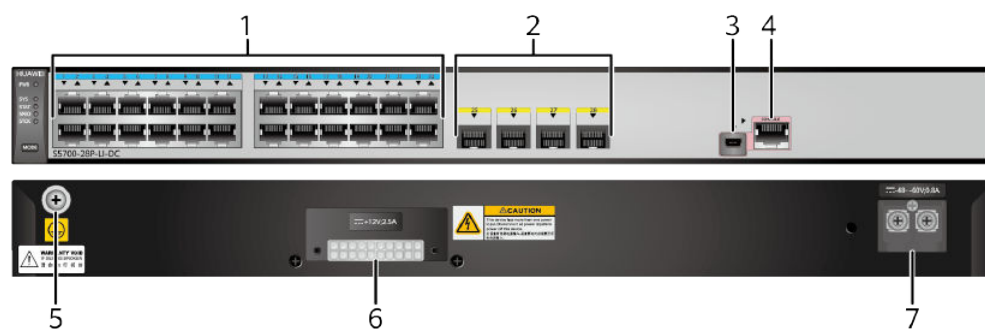
[Table 4-20](#) lists the mapping between the S5700-28P-LI-DC chassis and software versions.

**Table 4-20** Version mapping

Series	Model	Software Version
S5700-LI	S5700-28P-LI-DC	V200R001C00 to V200R012C00 versions  <b>NOTE</b> This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

## Appearance and Structure

**Figure 4-9** S5700-28P-LI-DC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (applicable in V200R002C00 and later versions, works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only used for stack connection, applicable in V200R007C00 and later versions)</b></li> <li>• <b>1 m and 10 m SFP+ copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m AOC cables (only used for stack connection, applicable in V200R003C00 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>
3	One mini USB port	4	One console port
5	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	6	RPS socket <b>NOTE</b> It is used with an <b>RPS cable</b> , which is not hot swappable.
7	DC power terminal <b>NOTE</b> It is used together with a <b>DC Power Cable</b> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 4-21** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-21** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-22](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-22** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-23](#).

**Table 4-23** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

## Indicator Description

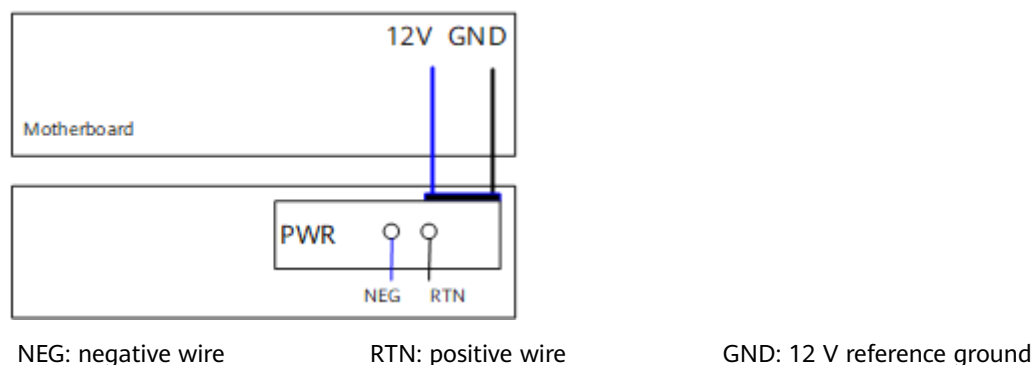
The S5700-28P-LI-DC has similar indicators to those on the S5700-28X-LI-AC, except that the S5700-28P-LI-DC does not have an RPS indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5700-28P-LI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

**Figure 4-10** shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

**Figure 4-10** Power supply by a single DC power module



## Heat Dissipation

The S5700-28P-LI-DC has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-24** lists technical specifications of the S5700-28P-LI-DC.

**Table 4-24** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none"> <li>V200R001: 64 MB</li> <li>V200R002 and later versions: 200 MB</li> </ul>
Mean time between failures (MTBF)	49.69 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 1$ kV in differential mode, $\pm 2$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	2.8 kg (6.18 lb)
Stack ports	<ul style="list-style-type: none"> <li>V200R010 and earlier versions: the last two uplink 1000BASE-X optical ports</li> <li>V200R011 and later versions: four uplink 1000BASE-X optical ports</li> </ul>
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput)	24 W



Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	17.6 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-3000 m (0-9483 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02353831

## 4.4.5 S5700-28P-PWR-LI-AC

### Version Mapping

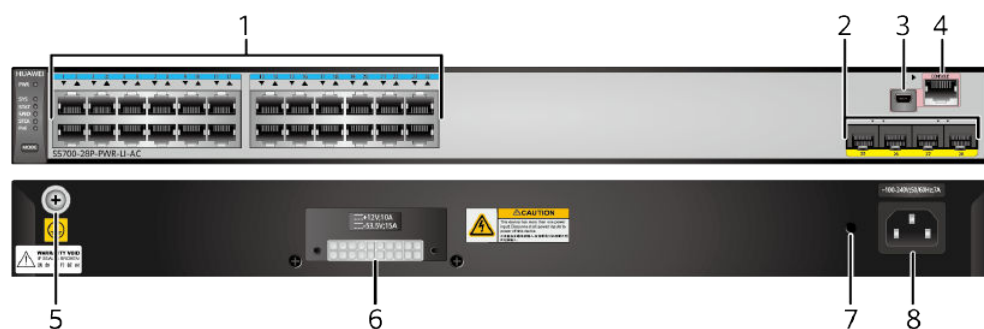
**Table 4-25** lists the mapping between the S5700-28P-PWR-LI-AC chassis and software versions.

**Table 4-25** Version mapping

Series	Model	Software Version
S5700-LI	S5700-28P-PWR-LI-AC	V200R001C00 to V200R012C00 versions  <b>NOTE</b> This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

## Appearance and Structure

**Figure 4-11** S5700-28P-PWR-LI-AC appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four 1000BASE-X ports  Applicable modules and cables: <ul style="list-style-type: none"><li>• <b>GE optical module</b></li><li>• <b>GE-CWDM optical module</b></li><li>• <b>GE-DWDM optical module</b></li><li>• <b>GE copper module (applicable in V200R002C00 and later versions, works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li><li>• <b>Stack optical module (only used for stack connection, applicable in V200R007C00 and later versions)</b></li><li>• <b>1 m and 10 m SFP+ copper cables (only used for stack connection)</b></li><li>• <b>3 m and 10 m AOC cables (only used for stack connection, applicable in V200R003C00 and later versions)</b></li><li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li></ul>
3	One mini USB port	4	One console port
5	Ground screw  <b>NOTE</b> It is used with a <b>ground cable</b> .	6	RPS socket  <b>NOTE</b> <ul style="list-style-type: none"><li>• It is used with an <b>RPS cable</b> which is not hot swappable.</li><li>• A PoE switch can have an RPS power supply connected to this socket to provide inputs for system power supply and PoE power supply. The two inputs are independent of each other. The RPS power supply can also be used as a backup of the system power supply when it does not provide PoE power.</li></ul>

7	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	8	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-26](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-26** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-27](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-27** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-28](#).

**Table 4-28** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

## Indicator Description

The S5700-28P-PWR-LI-AC has similar indicators to those on the S5700-28X-PWR-LI-AC, except that the S5700-28P-PWR-LI-AC does not have an RPS indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5700-28P-PWR-LI-AC has a built-in power module and does not support pluggable power modules.

It can provide PoE power supply and connect to an RPS1800 power supply for power redundancy. [Table 4-29](#) lists its power supply configurations.

**Table 4-29** Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
No RPS used	369.6 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 24</li><li>802.3at (30 W per port): 12</li></ul>

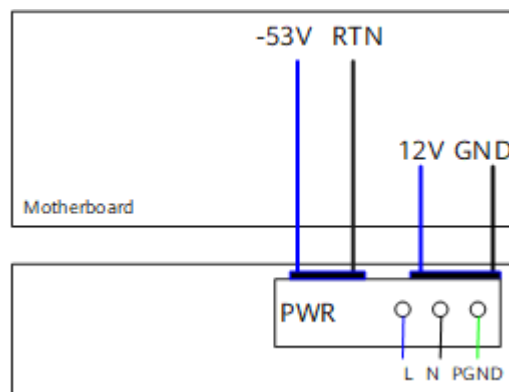
Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
RPS used	<ul style="list-style-type: none"> <li>V200R001: 369.6 W</li> <li>Versions later than V200R001: 800 W</li> </ul>	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>

**NOTE**

When an S5700-28P-PWR-LI-AC switch of V200R001 connects to an RPS1800, the RPS1800 only provides PoE power backup and does not increase the switch's PoE power.

**Figure 4-12** shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

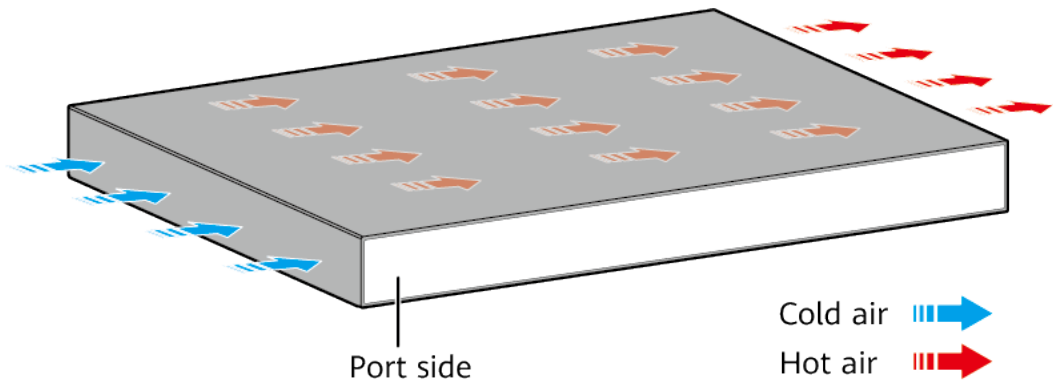
**Figure 4-12** Power supply by a built-in AC PoE power module



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5700-28P-PWR-LI-AC has three built-in fans for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-30** lists technical specifications of the S5700-28P-PWR-LI-AC.

**Table 4-30** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none"> <li>V200R001: 64 MB</li> <li>V200R002 and later versions: 200 MB</li> </ul>
Mean time between failures (MTBF)	44.24 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	4 kg (8.82 lb)
Stack ports	<ul style="list-style-type: none"> <li>V200R010 and earlier versions: the last two uplink 1000BASE-X optical ports</li> <li>V200R011 and later versions: four uplink 1000BASE-X optical ports</li> </ul>

Item	Description
RTC	Supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	436.5 W (system power consumption: 66.5 W, PoE: 370 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	29.2 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)



Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02353175

## 4.4.6 S5700-52P-LI-AC

### Version Mapping

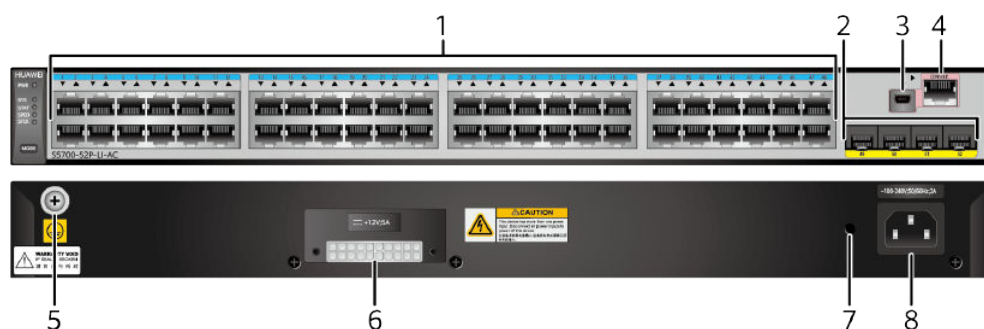
**Table 4-31** lists the mapping between the S5700-52P-LI-AC chassis and software versions.

**Table 4-31** Version mapping

Series	Model	Software Version
S5700-LI	S5700-52P-LI-AC	V200R001C00 to V200R012C00 versions  <b>NOTE</b> This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

### Appearance and Structure

**Figure 4-13** S5700-52P-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (applicable in V200R002C00 and later versions, works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only used for stack connection, applicable in V200R007C00 and later versions)</b></li> <li>• <b>1 m and 10 m SFP+ copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m AOC cables (only used for stack connection, applicable in V200R003C00 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>
3	One mini USB port	4	One console port
5	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	6	RPS socket <b>NOTE</b> It is used with an <b>RPS cable</b> , which is not hot swappable.
7	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	8	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 4-32](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-32** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-33](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-33** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-34](#).

**Table 4-34** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

## Indicator Description

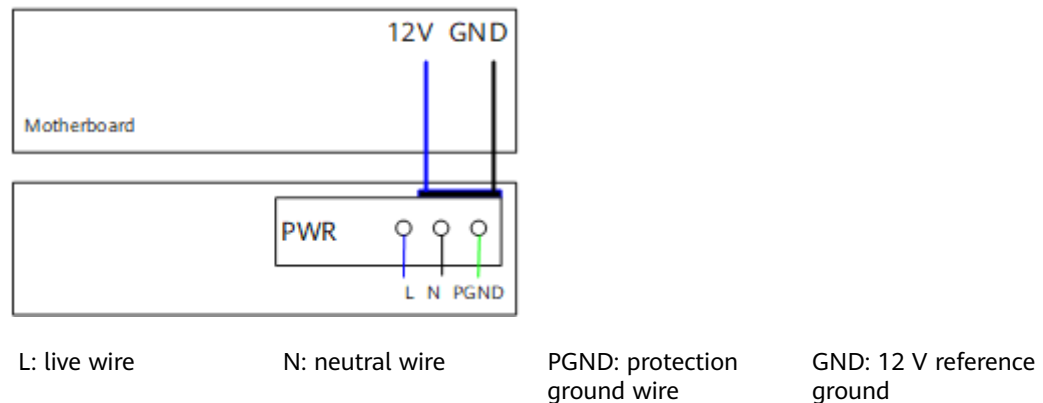
The S5700-52P-LI-AC has similar indicators to those on the S5700-28X-LI-AC, except that the S5700-52P-LI-AC does not have an RPS indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5700-52P-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

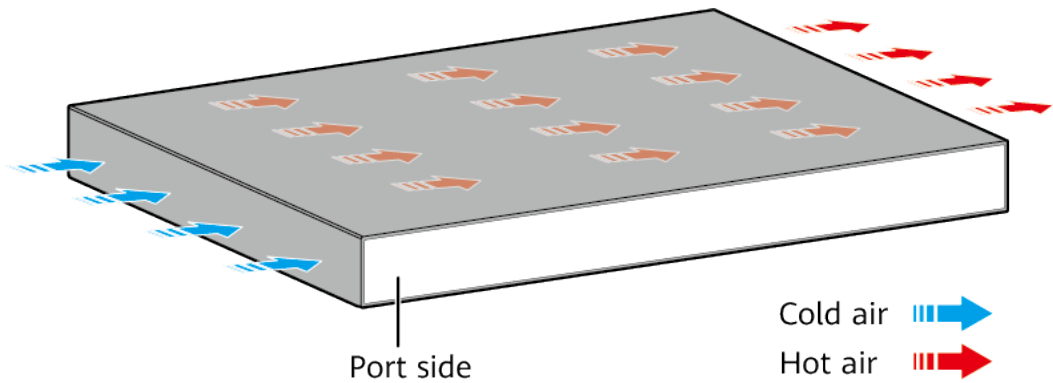
**Figure 4-14** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-14** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5700-52P-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-35** lists technical specifications of the S5700-52P-LI-AC.

**Table 4-35** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none"> <li>V200R001: 64 MB</li> <li>V200R002 and later versions: 200 MB</li> </ul>
Mean time between failures (MTBF)	39.26 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	3.5 kg (7.72 lb)
Stack ports	<ul style="list-style-type: none"> <li>V200R010 and earlier versions: the last two uplink 1000BASE-X optical ports</li> <li>V200R011 and later versions: four uplink 1000BASE-X optical ports</li> </ul>

Item	Description
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	48.4 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	32.5 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 43.8 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>

Item	Description
Part number	02353174

## 4.4.7 S5700-52P-LI-DC

### Version Mapping

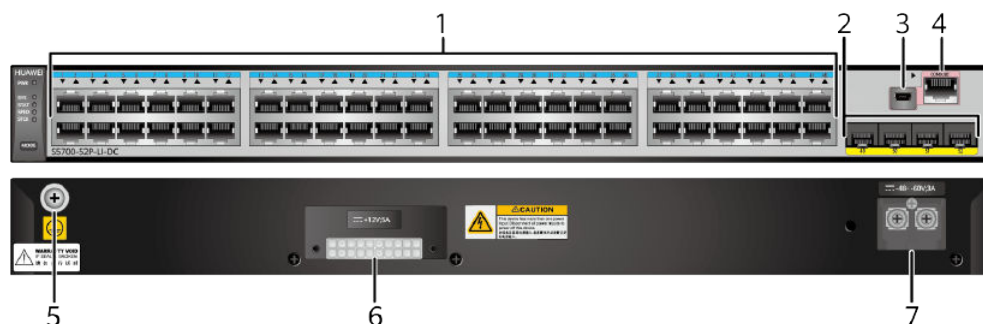
**Table 4-36** lists the mapping between the S5700-52P-LI-DC chassis and software versions.

**Table 4-36** Version mapping

Series	Model	Software Version
S5700-LI	S5700-52P-LI-DC	V200R001C00 to V200R012C00 versions  <b>NOTE</b> This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

### Appearance and Structure

**Figure 4-15** S5700-52P-LI-DC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (applicable in V200R002C00 and later versions, works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only used for stack connection, applicable in V200R007C00 and later versions)</b></li> <li>• <b>1 m and 10 m SFP+ copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m AOC cables (only used for stack connection, applicable in V200R003C00 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>
3	One mini USB port	4	One console port
5	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	6	RPS socket <b>NOTE</b> It is used with an <b>RPS cable</b> , which is not hot swappable.
7	DC power terminal <b>NOTE</b> It is used together with a <b>DC Power Cable</b> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 4-37** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.



**Table 4-37** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-38](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-38** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-39](#).

**Table 4-39** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

## Indicator Description

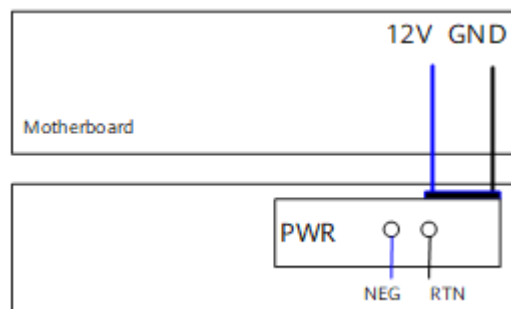
The S5700-52P-LI-DC has similar indicators to those on the S5700-28X-LI-AC, except that the S5700-52P-LI-DC does not have an RPS indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5700-52P-LI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

**Figure 4-16** shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

**Figure 4-16** Power supply by a single DC power module



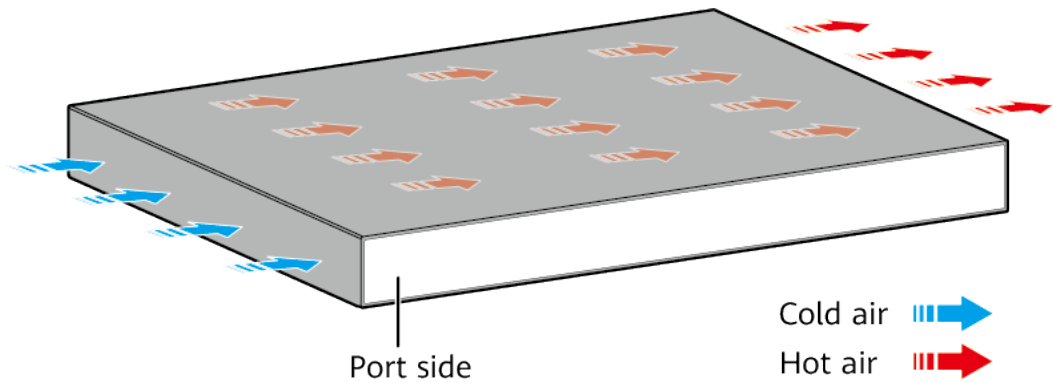
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

## Heat Dissipation

The S5700-52P-LI-DC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-40** lists technical specifications of the S5700-52P-LI-DC.

**Table 4-40** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none"> <li>V200R001: 64 MB</li> <li>V200R002 and later versions: 200 MB</li> </ul>
Mean time between failures (MTBF)	39.26 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 1$ kV in differential mode, $\pm 2$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	3.5 kg (7.72 lb)
Stack port	<ul style="list-style-type: none"> <li>V200R010 and earlier versions: the last two uplink 1000BASE-X optical ports</li> <li>V200R011 and later versions: four uplink 1000BASE-X optical ports</li> </ul>

Item	Description
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	48.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	30.3 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 43.8 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>

Item	Description
Part number	02353830

## 4.4.8 S5700-52P-PWR-LI-AC

### Version Mapping

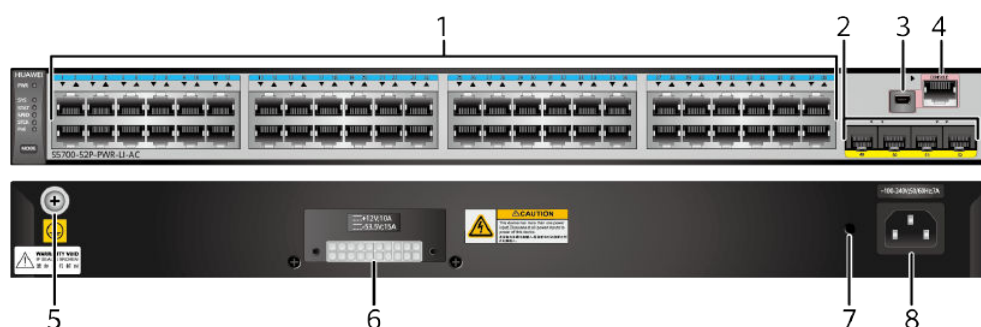
**Table 4-41** lists the mapping between the S5700-52P-PWR-LI-AC chassis and software versions.

**Table 4-41** Version mapping

Series	Model	Software Version
S5700-LI	S5700-52P-PWR-LI-AC	V200R001C00 to V200R012C00 versions  <b>NOTE</b> This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

### Appearance and Structure

**Figure 4-17** S5700-52P-PWR-LI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (applicable in V200R002C00 and later versions, works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only used for stack connection, applicable in V200R007C00 and later versions)</b></li> <li>• <b>1 m and 10 m SFP+ copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m AOC cables (only used for stack connection, applicable in V200R003C00 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>
3	One mini USB port	4	One console port
5	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	6	<p>RPS socket</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• It is used with an <b>RPS cable</b> which is not hot swappable.</li> <li>• A PoE switch can have an RPS power supply connected to this socket to provide inputs for system power supply and PoE power supply. The two inputs are independent of each other. The RPS power supply can also be used as a backup of the system power supply when it does not provide PoE power.</li> </ul>

7	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	8	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-42](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-42** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-43](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-43** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-44](#).

**Table 4-44** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

## Indicator Description

The S5700-52P-PWR-LI-AC has similar indicators to those on the S5700-28X-PWR-LI-AC, except that the S5700-52P-PWR-LI-AC does not have an RPS indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5700-52P-PWR-LI-AC has a built-in power module and does not support pluggable power modules.

It can provide PoE power supply and connect to an RPS1800 power supply for power redundancy. [Table 4-45](#) lists its power supply configurations.

**Table 4-45** Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
No RPS used	369.6 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 12</li> </ul>



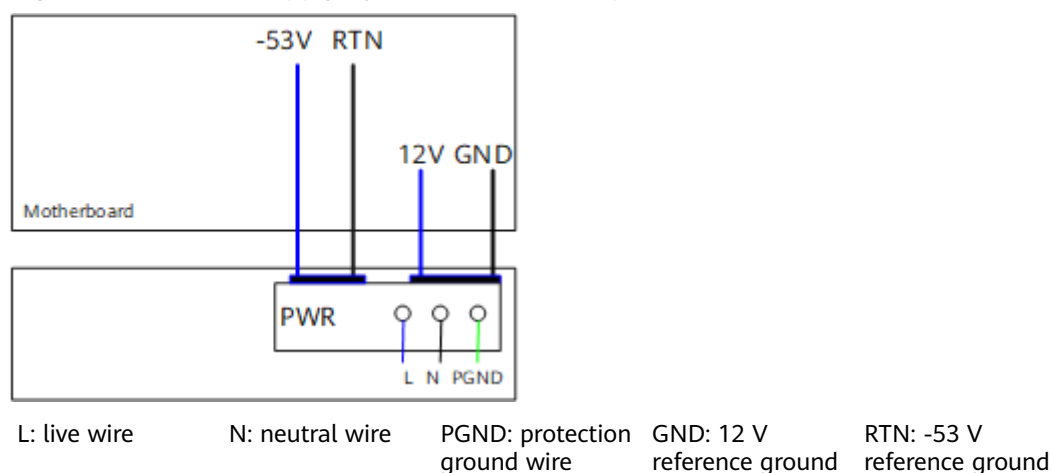
Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
RPS used	<ul style="list-style-type: none"> <li>V200R001: 369.6 W</li> <li>Versions later than V200R001: 800 W</li> </ul>	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 26</li> </ul>

**NOTE**

When an S5700-52P-PWR-LI-AC switch of V200R001 connects to an RPS1800, the RPS1800 only provides PoE power backup and does not increase the switch's PoE power.

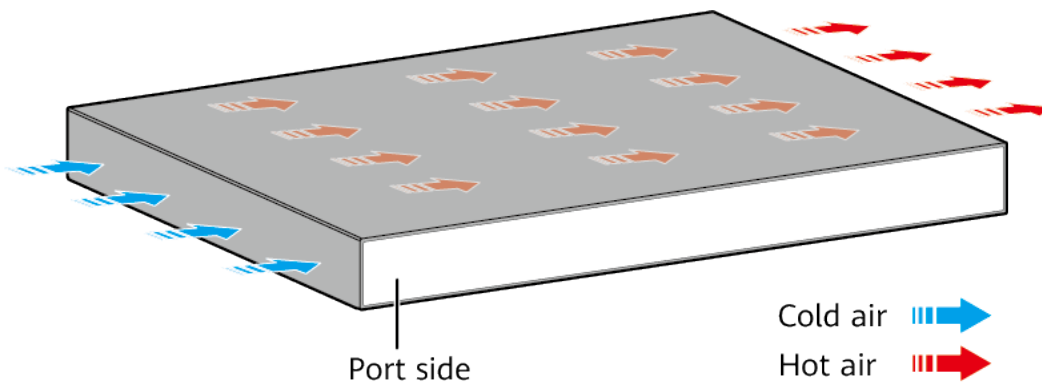
**Figure 4-18** shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

**Figure 4-18** Power supply by a built-in AC PoE power module



## Heat Dissipation

The S5700-52P-PWR-LI-AC has three built-in fans for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-46** lists technical specifications of the S5700-52P-PWR-LI-AC.

**Table 4-46** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none"> <li>V200R001: 64 MB</li> <li>V200R002 and later versions: 200 MB</li> </ul>
Mean time between failures (MTBF)	35.70 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	6 kg (13.23 lb)
Stack port	<ul style="list-style-type: none"> <li>V200R010 and earlier versions: the last two uplink 1000BASE-X optical ports</li> <li>V200R011 and later versions: four uplink 1000BASE-X optical ports</li> </ul>

Item	Description
RTC	Supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	464.5 W (system power consumption: 94.5 W, PoE: 370 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	41.2 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02353176

## 4.4.9 S5700-28TP-LI-AC

### Version Mapping

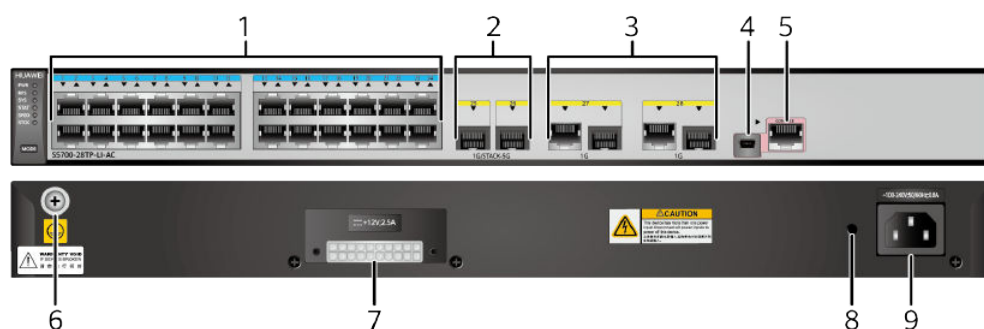
[Table 4-47](#) lists the mapping between the S5700-28TP-LI-AC chassis and software versions.

**Table 4-47** Version mapping

Series	Model	Software Version
S5700-LI	S5700-28TP-LI-AC	V200R003C10 to V200R012C00 versions <b>NOTE</b> This model does not match V200R005C00, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

### Appearance and Structure

**Figure 4-19** S5700-28TP-LI-AC appearance



1	<p>Twenty-four 10/100/1000BASE-T ports</p>	2	<p>Two 1000BASE-X ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only used for stack connection, applicable in V200R007C00 and later versions)</b></li> <li>• <b>1 m and 10 m SFP+ copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m AOC cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>
3	<p>Two combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>	4	<p>One mini USB port</p>
5	<p>One console port</p>	6	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>
7	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <b>RPS cable</b>, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>

9	AC socket  <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-48](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-48** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-49](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-49** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one

internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-50](#).

**Table 4-50** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

## Indicator Description

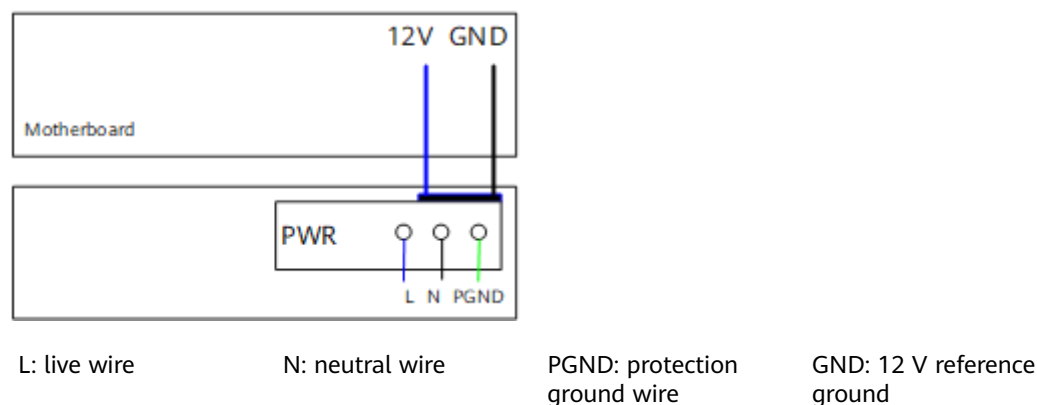
The S5700-28TP-LI-AC has the same types of indicators as the S5700-28X-LI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5700-28TP-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

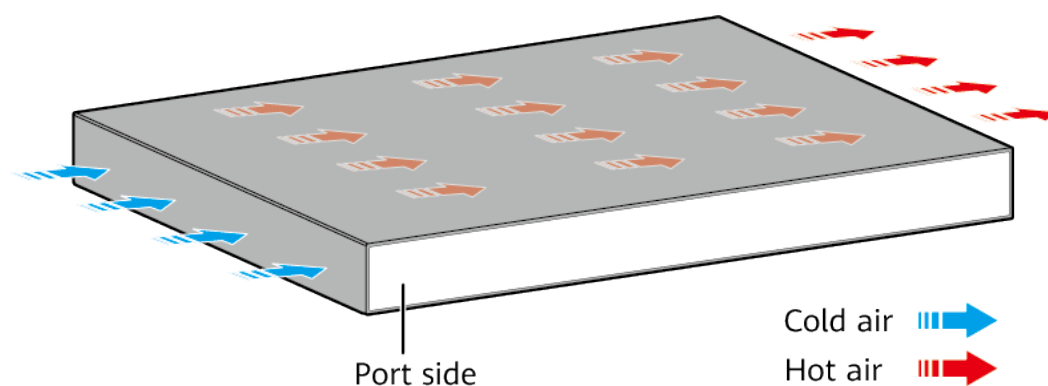
**Figure 4-20** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-20** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5700-28TP-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.



## Technical Specifications

**Table 4-51** lists technical specifications of the S5700-28TP-LI-AC.

**Table 4-51** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	65.66 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.1 kg (9.04 lb)
Stack ports	Two uplink 1000BASE-X optical ports (non-combo ports)
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	26.4 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	23.4 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 39.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010536

## 4.4.10 S5700-28TP-PWR-LI-AC

### Version Mapping

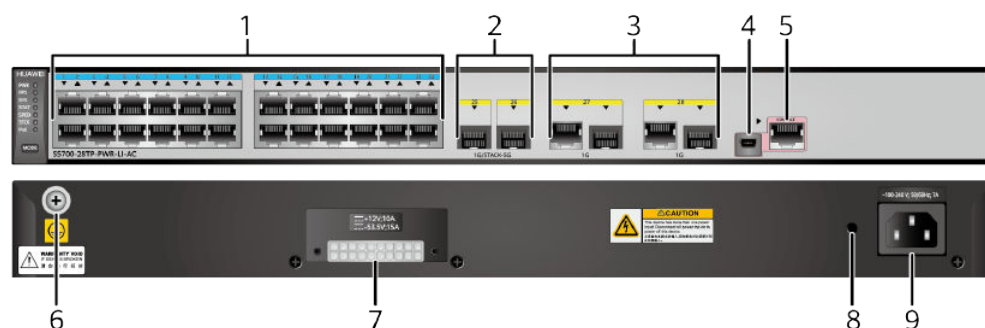
**Table 4-52** lists the mapping between the S5700-28TP-PWR-LI-AC chassis and software versions.

**Table 4-52** Version mapping

Series	Model	Software Version
S5700-LI	S5700-28TP-PWR-LI-AC	V200R003C10 to V200R012C00 versions  <b>NOTE</b> This model does not match V200R005C00, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

## Appearance and Structure

**Figure 4-21** S5700-28TP-PWR-LI-AC appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Two 1000BASE-X ports  Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only used for stack connection, applicable in V200R007C00 and later versions)</b></li> <li>• <b>1 m and 10 m SFP+ copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m AOC cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>
3	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>	4	One mini USB port
5	One console port	6	Ground screw  <b>NOTE</b> It is used with a <b>ground cable</b> .

7	<p>RPS socket</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>It is used with an <b>RPS cable</b> which is not hot swappable.</li> <li>A PoE switch can have an RPS power supply connected to this socket to provide inputs for system power supply and PoE power supply. The two inputs are independent of each other. The RPS power supply can also be used as a backup of the system power supply when it does not provide PoE power.</li> </ul>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b></p> <p>The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p><b>NOTE</b></p> <p>It is used with an <b>AC power cable</b>.</p>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 4-53](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-53** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-54](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-54** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-55](#).

**Table 4-55** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

## Indicator Description

The S5700-28TP-PWR-LI-AC has the same types of indicators as the S5700-28X-PWR-LI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

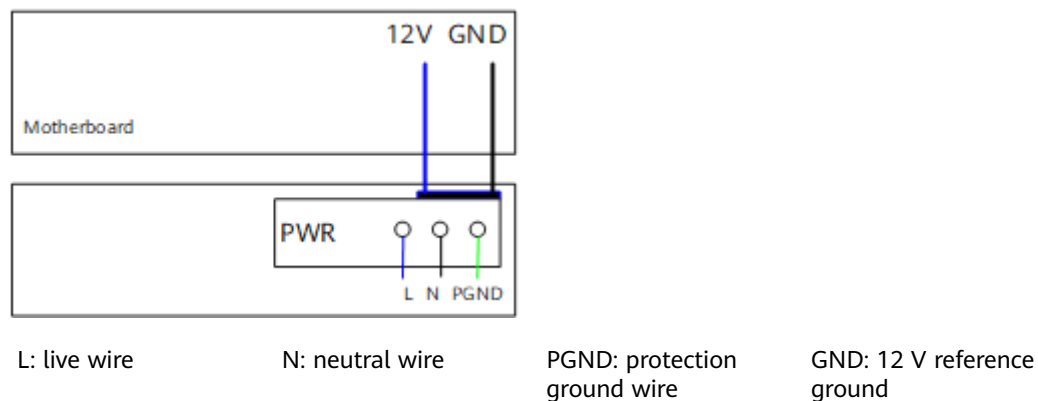
The S5700-28TP-PWR-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy. [Table 4-56](#) lists its power supply configurations.

**Table 4-56** Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
No RPS used	369.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
RPS used	800 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>

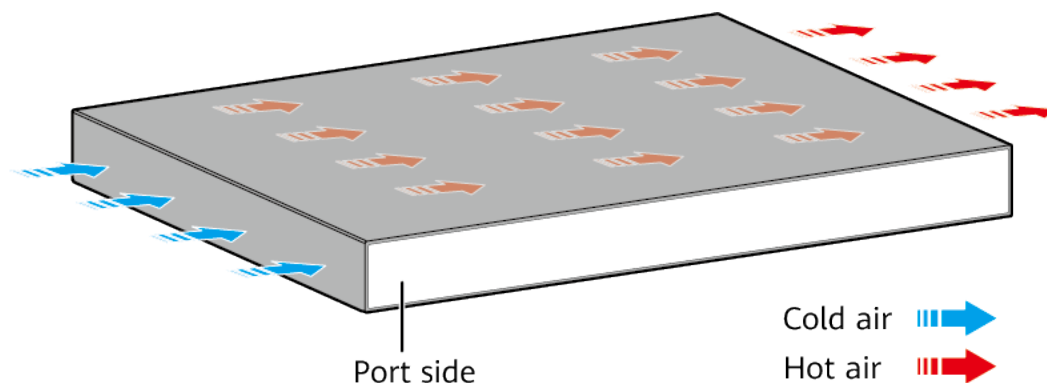
[Figure 4-22](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-22** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5700-28TP-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-57** lists technical specifications of the S5700-28TP-PWR-LI-AC.

**Table 4-57** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	46.2 years



Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	5.8 kg (12.79 lb)
Stack ports	Two uplink 1000BASE-X optical ports (non-combo ports)
RTC	Supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	469.7 W (system power consumption: 99.7 W, PoE: 370 W)
Typical power consumption (30% of traffic load)	32 W
	<ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>

Item	Description
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 48 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010537

## 4.4.11 S5701-28TP-PWR-LI-AC

### Version Mapping

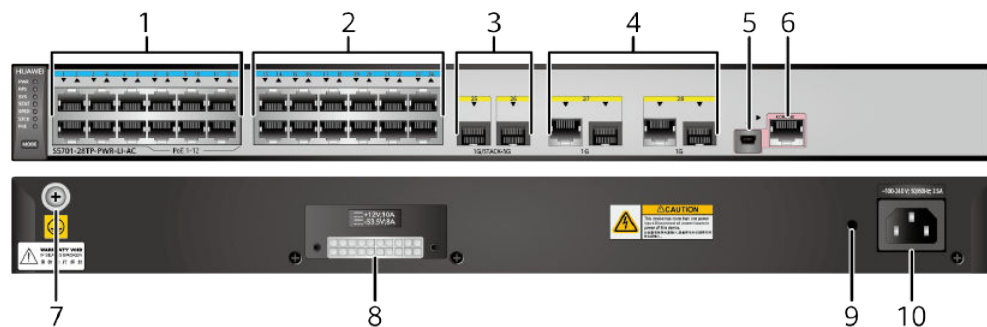
**Table 4-58** lists the mapping between the S5701-28TP-PWR-LI-AC chassis and software versions.

**Table 4-58** Version mapping

Series	Model	Software Version
S5700-LI	S5701-28TP-PWR-LI-AC	V200R003C10 to V200R012C00 versions <b>NOTE</b> This model does not match V200R005C00, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

## Appearance and Structure

Figure 4-23 S5701-28TP-PWR-LI-AC appearance



1	Twelve PoE+ 10/100/1000BASE-T ports	2	Twelve 10/100/1000BASE-T ports
3	Two 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only used for stack connection, applicable in V200R007C00 and later versions)</b></li> <li>• <b>1 m and 10 m SFP+ copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m AOC cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>	4	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>
5	One mini USB port	6	One console port

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>RPS socket</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• It is used with an <a href="#">RPS cable</a> which is not hot swappable.</li> <li>• A PoE switch can have an RPS power supply connected to this socket to provide inputs for system power supply and PoE power supply. The two inputs are independent of each other. The RPS power supply can also be used as a backup of the system power supply when it does not provide PoE power.</li> </ul>
9	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>	10	<p>AC socket</p> <p><b>NOTE</b> It is used with an <a href="#">AC power cable</a>.</p>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-59](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-59** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-60](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-60** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-61](#).

**Table 4-61** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

## Indicator Description

The S5701-28TP-PWR-LI-AC has the same types of indicators as the S5700-28X-PWR-LI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

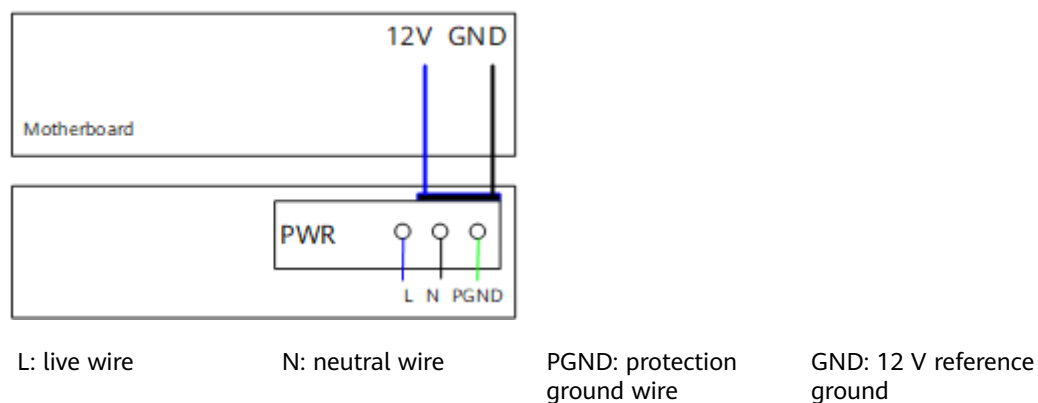
The S5701-28TP-PWR-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy. [Table 4-62](#) lists its power supply configurations.

**Table 4-62** Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
No RPS used	184.8 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 12</li><li>802.3at (30 W per port): 6</li></ul>
RPS used	184.8 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 12</li><li>802.3at (30 W per port): 6</li></ul>

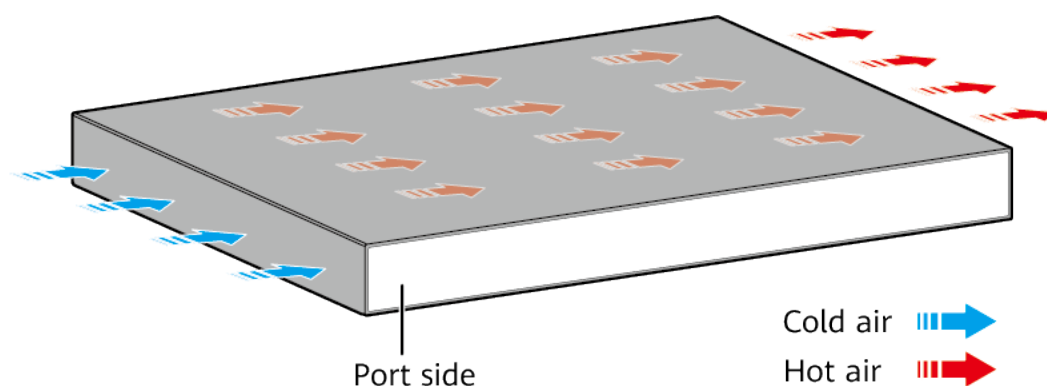
[Figure 4-24](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-24** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5701-28TP-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-63** lists technical specifications of the S5701-28TP-PWR-LI-AC.

**Table 4-63** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	45.91 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	5.7 kg (12.57 lb)
Stack ports	Two uplink 1000BASE-X optical ports (non-combo ports)
RTC	Supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	238.7 W (system power consumption: 53.9 W, PoE: 184.8 W)
Typical power consumption (30% of traffic load)	29 W
	<ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>



Item	Description
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010538

## 4.4.12 S5700-28X-LI-AC

### Version Mapping

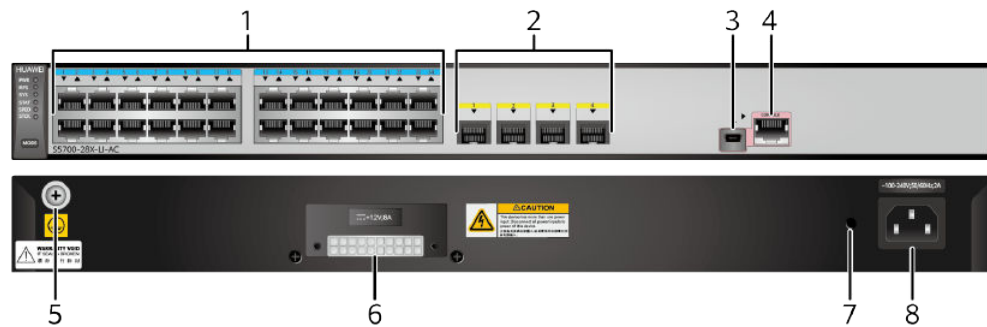
[Table 4-64](#) lists the mapping between the S5700-28X-LI-AC chassis and software versions.

**Table 4-64** Version mapping

Series	Model	Software Version
S5700-LI	S5700-28X-LI-AC	V200R002C00 to V200R012C00 versions <b>NOTE</b> This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

## Appearance and Structure

Figure 4-25 S5700-28X-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <a href="#">GE optical module</a></li> <li>• <a href="#">GE-CWDM optical module</a></li> <li>• <a href="#">GE-DWDM optical module</a></li> <li>• <a href="#">GE copper module (only 1000 Mbit/s supported)</a></li> <li>• <a href="#">10GE SFP+ optical module</a></li> <li>• <a href="#">10GE-CWDM optical module (applicable in V200R005C00 and later versions)</a></li> <li>• <a href="#">1 m, 3 m, and 10 m SFP+ high-speed copper cables</a></li> <li>• <a href="#">5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</a></li> <li>• <a href="#">3 m and 10 m AOC cables (applicable in V200R003C00 and later versions)</a></li> <li>• <a href="#">0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</a></li> </ul>
3	One mini USB port	4	One console port

5	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	6	RPS socket <b>NOTE</b> It is used with an <b>RPS cable</b> , which is not hot swappable.
7	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	8	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 4-65** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-65** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. **Table 4-66** describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-66** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-67](#).

**Table 4-67** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

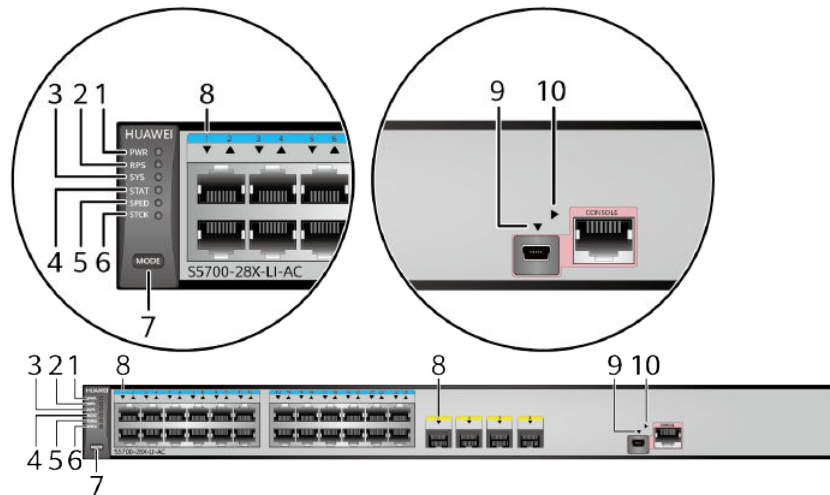
## Indicator Description

### NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-26** Indicators on the S5700-28X-LI-AC



**Table 4-68** Description of indicators on the switch

Number	Indicator/ Button	Color	Description
1	PWR: internal power supply indicator	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the RPS system.
2	RPS: RPS power supply indicator	-	Off: No RPS is connected to the switch.
		Green	<ul style="list-style-type: none"> <li>Steady on: The RPS is in cold backup state.</li> <li>Blinking: The RPS is providing power for another device.</li> </ul>
		Yellow	Blinking: The RPS is providing power for the switch and the built-in power module of the switch is faulty.
3	SYS: system status indicator	-	Off: The system is not running.

Number	Indicator/Button	Color	Description
		Green	<p>Fast blinking:</p> <ul style="list-style-type: none"> <li>The system is starting.</li> <li>The system is copying the system software and configuration file from a USB flash drive during a USB-based upgrade (only applicable to S5701-28X-LI-AC).</li> </ul> <p>Slow blinking: The system is running normally.</p>
		Yellow	<p>Blinking:</p> <ul style="list-style-type: none"> <li>The switch is in sleeping mode.</li> <li>During a USB-based upgrade, this indicator blinks after the switch downloads required files and restarts. At this time, the upgrade is successful and you can remove the USB flash drive (only applicable to S5701-28X-LI-AC).</li> </ul> <p><b>NOTE</b> The system can wake from the sleeping state if you press the MODE button. The S5700-10P-LI-AC does not support the sleeping function.</p>
		Red	<ul style="list-style-type: none"> <li>Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.</li> <li>Blinking: The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed (only applicable to S5701-28X-LI-AC).</li> </ul>
4	STAT: status indicator	Green	<ul style="list-style-type: none"> <li>Off: The status mode is not selected.</li> <li>Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.</li> </ul>

Number	Indicator/ Button	Color	Description
5	SPED: speed indicator	Green	<ul style="list-style-type: none"> <li>Off: The speed mode is not selected.</li> <li>Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>
6	STCK: stack indicator  <b>NOTE</b> This indicator has different states and meanings in different versions. Here are the indicator states and meaning in versions earlier than V200R003C00.	Green	<ul style="list-style-type: none"> <li>Off: The stack mode is not selected.</li> <li>Steady on: The service port indicators show the stack information. After 45 seconds, the service port indicators automatically restore to the status mode.</li> <li>Blinking: The switch is the master switch in a stack or a standalone switch.</li> </ul>
	STCK: stack indicator  <b>NOTE</b> This indicator has different states and meanings in different versions. Here are the indicator states and meaning in V200R003C00 and later versions.	Green	If you are not changing the indicator mode (default): <ul style="list-style-type: none"> <li>Off: The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>Blinking: The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> </ul>

Number	Indicator/Button	Color	Description
			<p>If you are changing the indicator mode:</p> <ul style="list-style-type: none"><li>• Off: The stack mode is not selected.</li><li>• Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.</li><li>• Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li></ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	MODE: mode switch button	-	<ul style="list-style-type: none"><li>• When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li><li>• When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li><li>• When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li></ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>



Number	Indicator/Button	Color	Description
8	Service port indicator <ul style="list-style-type: none"> <li>GE electrical ports: The ports are numbered from bottom to top and left to right, starting with 1.</li> <li>SFP/SFP+ optical ports: Each port has an indicator above it.</li> </ul>		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-69</a> .
9	Mini USB indicator	Green	<ul style="list-style-type: none"> <li>Off: The Mini USB port is not active, and the console port is active.</li> <li>Steady on: The Mini USB port is active.</li> </ul> When this indicator is on, the console indicator is off.
10	Console indicator	Green	<ul style="list-style-type: none"> <li>Off: The console port is not active, and the Mini USB port is active.</li> <li>Steady on (default): The console port is active.</li> </ul> When this LED is on, the Mini USB port indicator is off.

**Table 4-69** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.

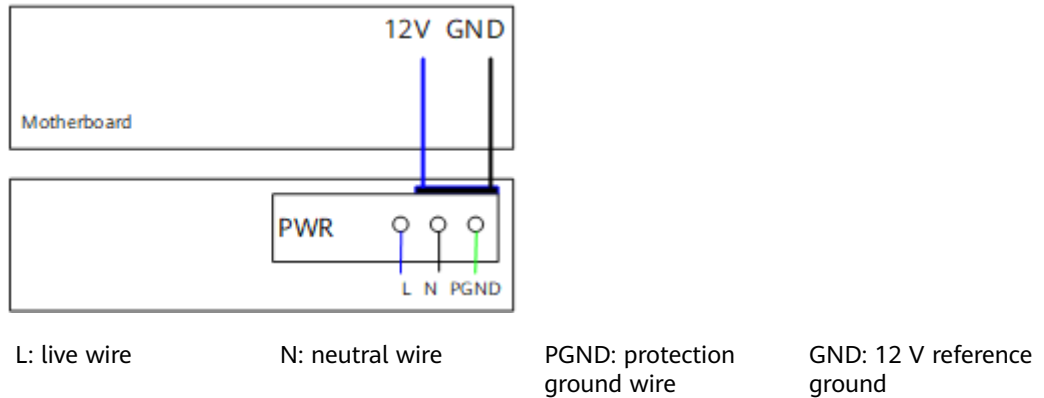
Display Mode	Color	Status	Description
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>• If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5700-28X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

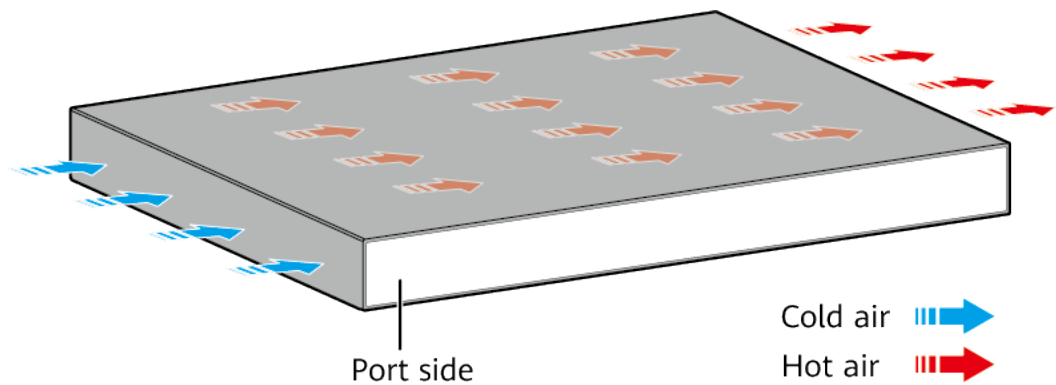
**Figure 4-27** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-27** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5700-28X-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-70** lists technical specifications of the S5700-28X-LI-AC.

**Table 4-70** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	68.95 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.4 kg (7.5 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	41 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	29.7 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 44.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02354215

### 4.4.13 S5700-28X-LI-DC

#### Version Mapping

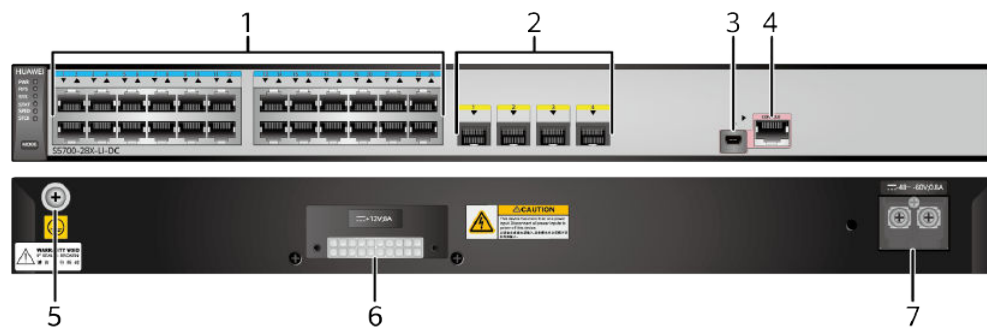
**Table 4-71** lists the mapping between the S5700-28X-LI-DC chassis and software versions.

**Table 4-71** Version mapping

Series	Model	Software Version
S5700-LI	S5700-28X-LI-DC	V200R002C00 to V200R012C00 versions <b>NOTE</b> This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

## Appearance and Structure

Figure 4-28 S5700-28X-LI-DC appearance



1	Twenty-four 10/100/1000BASE-T ports	2 Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module (applicable in V200R005C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables (applicable in V200R003C00 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>
3	One mini USB port	4 One console port

5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	RPS socket <b>NOTE</b> It is used with an <a href="#">RPS cable</a> , which is not hot swappable.
7	DC power terminal <b>NOTE</b> It is used together with a <a href="#">DC Power Cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-72](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-72** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-73](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-73** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-74](#).

**Table 4-74** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

## Indicator Description

The S5700-28X-LI-DC has the same types of indicators as the S5700-28X-LI-AC. For details, see [Indicator Description](#).

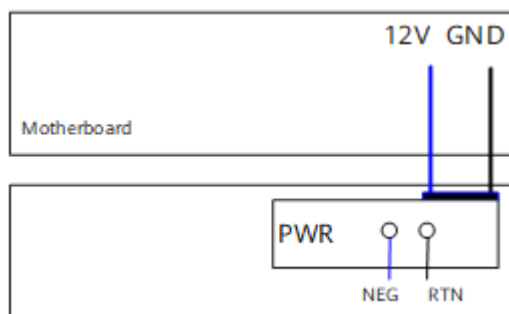
## Power Supply Configuration

The S5700-28X-LI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 4-29](#) shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.



**Figure 4-29** Power supply by a single DC power module



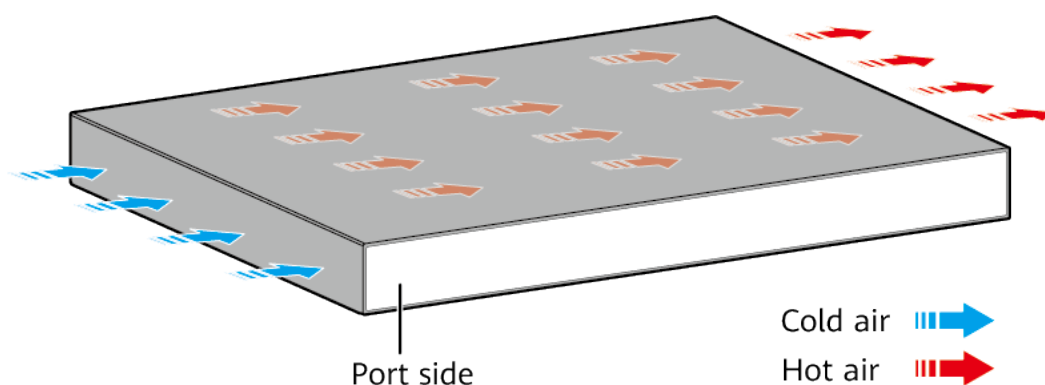
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

## Heat Dissipation

The S5700-28X-LI-DC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-75** lists technical specifications of the S5700-28X-LI-DC.

**Table 4-75** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	68.95 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 1$ kV in differential mode, $\pm 2$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.3 kg (7.28 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	42 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	30.7 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 44.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02354234

## 4.4.14 S5700-28X-PWR-LI-AC

### Version Mapping

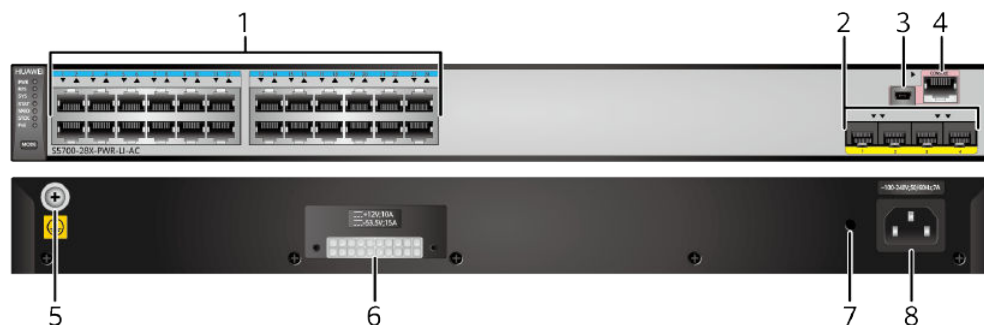
**Table 4-76** lists the mapping between the S5700-28X-PWR-LI-AC chassis and software versions.

**Table 4-76** Version mapping

Series	Model	Software Version
S5700-LI	S5700-28X-PWR-LI-AC	V200R002C00 to V200R012C00 versions <b>NOTE</b> This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

## Appearance and Structure

Figure 4-30 S5700-28X-PWR-LI-AC appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2 Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module (applicable in V200R005C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables (applicable in V200R003C00 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>
3	One mini USB port	4 One console port

5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	RPS socket <b>NOTE</b> <ul style="list-style-type: none"> <li>It is used with an <a href="#">RPS cable</a> which is not hot swappable.</li> <li>A PoE switch can have an RPS power supply connected to this socket to provide inputs for system power supply and PoE power supply. The two inputs are independent of each other. The RPS power supply can also be used as a backup of the system power supply when it does not provide PoE power.</li> </ul>
7	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	8	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-77](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-77** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-78](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-78** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-79](#).

**Table 4-79** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

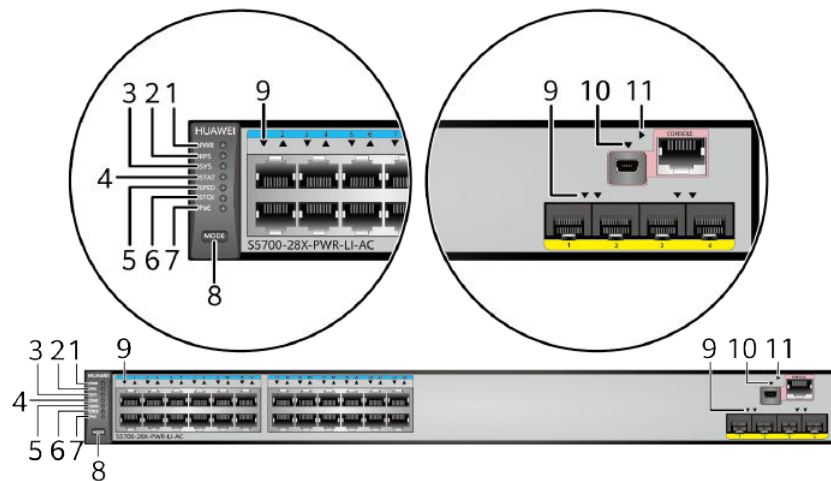
## Indicator Description

### NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-31** Indicators on the S5700-28X-PWR-LI-AC



**Table 4-80** Description of indicators on the switch

Number	Indicator/ Button	Color	Description
1	PWR: internal power supply indicator	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the RPS system.
2	RPS: RPS power supply indicator	-	Off: No RPS is connected to the switch.

Number	Indicator/ Button	Color	Description
		Green	<ul style="list-style-type: none"> <li>Steady on: The RPS is in cold backup state or forced power-on state.</li> <li>Blinking: The RPS is providing power for another device.</li> </ul>
		Yellow	<ul style="list-style-type: none"> <li>Steady on: The RPS is in alarm state. (No 870 W PoE power module is available in the RPS1800 or the RPS1800 cannot provide power supply to the local switch at this time.)</li> <li>Blinking: The RPS is providing power for the switch and the built-in power module of the switch is faulty.</li> </ul>
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> <li>Fast blinking: The system is starting.</li> <li>Slow blinking: The system is running normally.</li> </ul>
		Red	Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.
4	STAT: status indicator	Green	<ul style="list-style-type: none"> <li>Off: The status mode is not selected.</li> <li>Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.</li> </ul>
5	SPED: speed indicator	Green	<ul style="list-style-type: none"> <li>Off: The speed mode is not selected.</li> <li>Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>



Number	Indicator/ Button	Color	Description
6	STCK: stack indicator  <b>NOTE</b> This indicator has different states and meanings in different versions. Here are the indicator states and meaning in versions earlier than V200R003C00.	Green	<ul style="list-style-type: none"> <li>● Off: The stack mode is not selected.</li> <li>● Steady on: The service port indicators show the stack information. After 45 seconds, the service port indicators automatically restore to the status mode.</li> <li>● Blinking: The switch is the master switch in a stack or a standalone switch.</li> </ul>
	STCK: stack indicator  <b>NOTE</b> This indicator has different states and meanings in different versions. Here are the indicator states and meaning in V200R003C00 and later versions.	Green	If you are not changing the indicator mode (default): <ul style="list-style-type: none"> <li>● Off: The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>● Blinking: The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> </ul> If you are changing the indicator mode: <ul style="list-style-type: none"> <li>● Off: The stack mode is not selected.</li> <li>● Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.</li> <li>● Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> After 45 seconds, the service port indicators automatically restore to the status mode.

Number	Indicator/ Button	Color	Description
7	PoE: PoE indicator	Green	<ul style="list-style-type: none"> <li>● Off: The PoE mode is not selected.</li> <li>● Steady on: The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>
8	MODE: mode switch button	-	<ul style="list-style-type: none"> <li>● When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>● When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>● When you press this button a third time, the service port indicators change to PoE mode and show the PoE status of ports.</li> <li>● When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p><b>NOTE</b> On the S5700-52P-PWR-LI-AC and S5700-28P-PWR-LI-AC of the V200R001 version, the indicator switching sequence is Speed -&gt; PoE -&gt; Stack.</p> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>

Number	Indicator/ Button	Color	Description
9	Service port indicator <ul style="list-style-type: none"> <li>• GE electrical ports: The ports are numbered from bottom to top and left to right, starting with 1.</li> <li>• 10GE optical ports: Each port has an indicator above it.</li> </ul>		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-81</a> .
10	Mini USB indicator	Green	<ul style="list-style-type: none"> <li>• Off: The Mini USB port is not active, and the console port is active.</li> <li>• Steady on: The Mini USB port is active.</li> </ul> <p>When this indicator is on, the console indicator is off.</p>
11	Console indicator	Green	<ul style="list-style-type: none"> <li>• Off: The console port is not active, and the Mini USB port is active.</li> <li>• Steady on (default): The console port is active.</li> </ul> <p>When this LED is on, the Mini USB port indicator is off.</p>

**Table 4-81** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> <li>• The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.</li> <li>• The total power consumption of PDs has reached the maximum power of the switch.</li> <li>• The manual power management mode is used and the port is not enabled to provide power to the PD.</li> </ul>
Stack	-	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
	Green	Steady on	<p>The switch is not the master switch in a stack.</p> <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	<p>The switch is the master switch in a stack.</p> <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

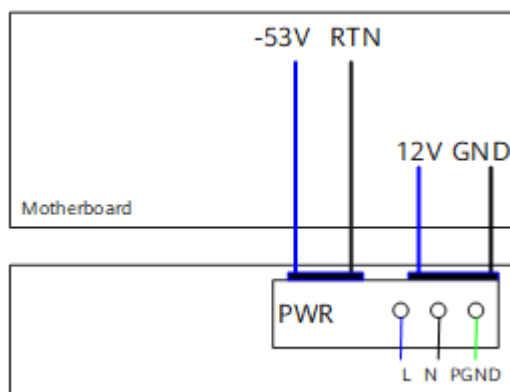
The S5700-28X-PWR-LI-AC has a built-in power module and does not support pluggable power modules. It can provide PoE power supply and connect to an RPS1800 power supply for power redundancy. [Table 4-82](#) lists its power supply configurations.

**Table 4-82** Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
No RPS used	369.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
RPS used	800 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>

[Figure 4-32](#) shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

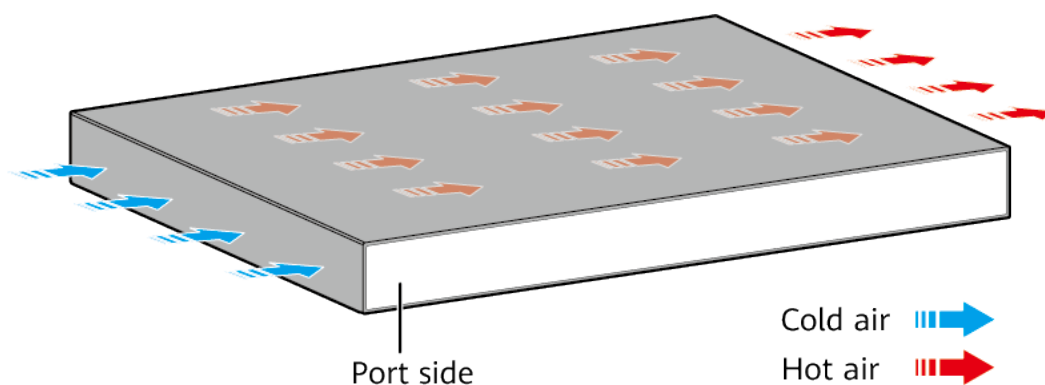
**Figure 4-32** Power supply by a built-in AC PoE power module



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5700-28X-PWR-LI-AC has three built-in fans for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-83** lists technical specifications of the S5700-28X-PWR-LI-AC.

**Table 4-83** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB

Item	Description
Mean time between failures (MTBF)	61.53 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	4.7 kg (10.36 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	448.8 W (system power consumption: 78.8 W, PoE: 370 W)
Typical power consumption (30% of traffic load)	39.4 W
<ul style="list-style-type: none"> <li>● Tested according to ATIS standard</li> <li>● EEE enabled</li> <li>● No PoE power consumption</li> </ul>	

Item	Description
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02354217

## 4.4.15 S5700-28X-LI-24S-AC

### Version Mapping

**Table 4-84** lists the mapping between the S5700-28X-LI-24S-AC chassis and software versions.

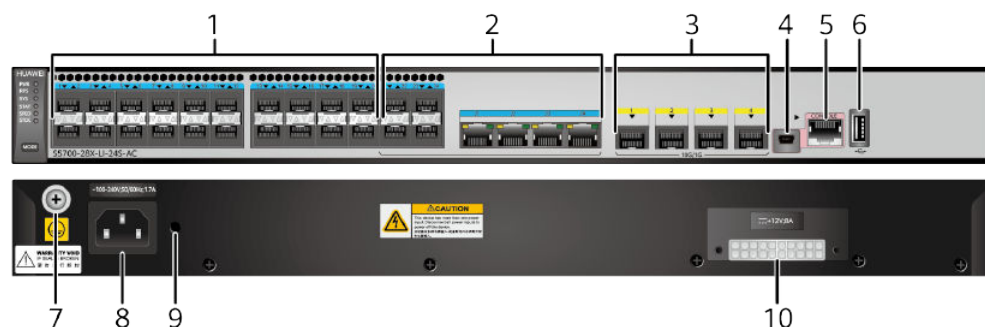
**Table 4-84** Version mapping

Series	Model	Software Version
S5700-LI	S5700-28X-LI-24S-AC	V200R003C00 to V200R012C00 versions <b>NOTE</b> This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.



## Appearance and Structure

Figure 4-33 S5700-28X-LI-24S-AC appearance



1	Twenty 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>	2 Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>
---	---	---

3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module (applicable in V200R005C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>	4	One mini USB port
5	One console port	6	One USB port
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	8	<p>AC socket</p> <p><b>NOTE</b> It is used with an <b>AC power cable</b>.</p>
9	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>	10	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <b>RPS cable</b>, which is not hot swappable.</p>

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-85](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-85** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-86](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-86** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-87](#).

**Table 4-87** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

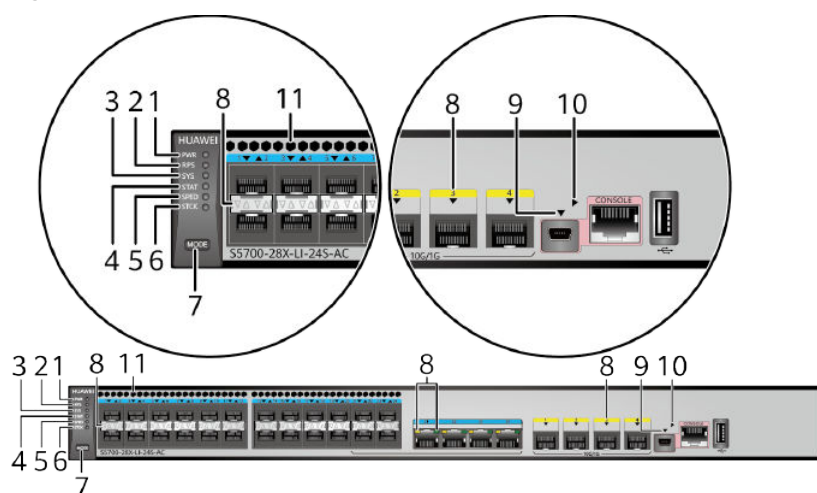
## Indicator Description

### NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-34** Indicators on the S5700-28X-LI-24S-AC



### NOTE

The S5701-28X-LI-24S-AC, S5700-28X-LI-24S-AC, and S5700-28X-LI-24S-DC have air holes above the 24 optical ports for heat dissipation (numbered 11 in [Figure 4-34](#)). The indicators for the service ports are numbered 8 in [Figure 4-34](#).

**Table 4-88** Description of indicators on the switch

Number	Indicator/ Button	Color	Description
1	PWR: internal power supply indicator	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the RPS system.

Number	Indicator/ Button	Color	Description
2	RPS: RPS power supply indicator	-	Off: No RPS is connected to the switch.
		Green	<ul style="list-style-type: none"> <li>Steady on: The RPS is in cold backup state.</li> <li>Blinking: The RPS is providing power for another device.</li> </ul>
		Yellow	Blinking: The RPS is providing power for the switch and the built-in power module of the switch is faulty.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> <li>Fast blinking: The system is starting or is copying the system software and configuration file from a USB flash drive during a USB-based upgrade.</li> <li>Slow blinking: The system is running normally.</li> </ul>
		Yellow	Blinking: The switch has restarted after a successful upgrade using a USB flash drive. You can remove the USB flash drive from the switch.
		Red	<ul style="list-style-type: none"> <li>Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.</li> <li>Blinking: The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.</li> </ul>
4	STAT: status indicator	Green	<ul style="list-style-type: none"> <li>Off: The status mode is not selected.</li> <li>Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.</li> </ul>

Number	Indicator/ Button	Color	Description
5	SPED: speed indicator	Green	<ul style="list-style-type: none"><li>• Off: The speed mode is not selected.</li><li>• Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.</li></ul>
6	STCK: stack indicator	Green	<p>If you are not changing the indicator mode (default):</p> <ul style="list-style-type: none"><li>• Off: The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li><li>• Blinking: The switch is a stack master switch or a standalone switch with the stacking function enabled.</li></ul> <p>If you are changing the indicator mode:</p> <ul style="list-style-type: none"><li>• Off: The stack mode is not selected.</li><li>• Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.</li><li>• Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li></ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

Number	Indicator/Button	Color	Description
7	MODE: mode switch button	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators restore to the default mode, and the STAT mode turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	Service port indicator <b>NOTE</b> Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-89</a> and <a href="#">Table 4-90</a> .	
9	Mini USB indicator	Green	<ul style="list-style-type: none"> <li>Off: The Mini USB port is not active, and the console port is active.</li> <li>Steady on: The Mini USB port is active.</li> </ul> <p>When this indicator is on, the console indicator is off.</p>



Number	Indicator/Button	Color	Description
10	Console indicator	Green	<ul style="list-style-type: none"> <li>Off: The console port is not active, and the Mini USB port is active.</li> <li>Steady on (default): The console port is active.</li> </ul> When this LED is on, the Mini USB port indicator is off.

**Table 4-89** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>

Display Mode	Color	Status	Description
	Green and yellow	Blinking	<p>The switch is the master switch in a stack.</p> <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

**Table 4-90** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	<p>10M/100M/1000M port: The port is operating at 10/100 Mbit/s.</p> <p>1000M/10GE port: The port is operating at 1000 Mbit/s.</p>
	Green	Blinking	<p>10M/100M/1000M port: The port is operating at 1000 Mbit/s.</p> <p>1000M/10GE port: The port is operating at 10 Gbit/s.</p>
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	<p>The switch is not the master switch in a stack.</p> <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>

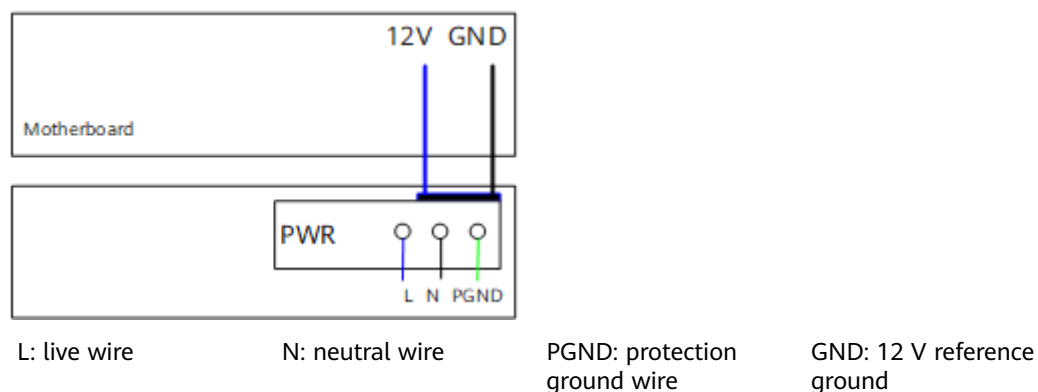
Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5700-28X-LI-24S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

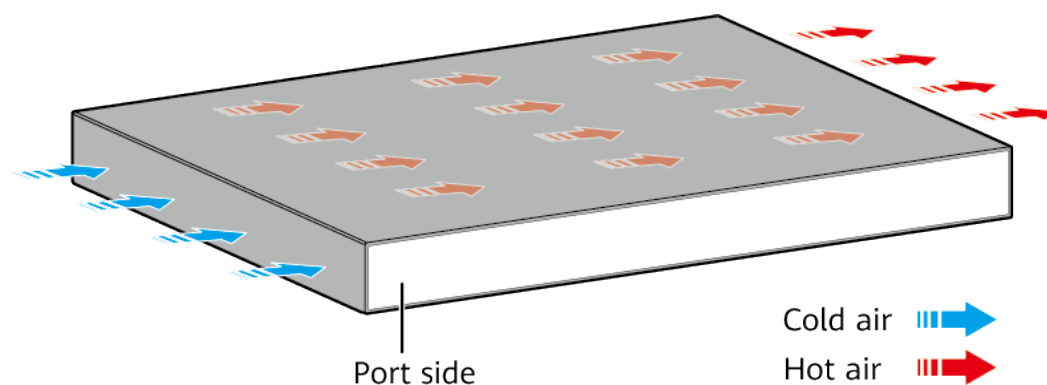
**Figure 4-35** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-35** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5700-28X-LI-24S-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-91** lists specifications of the S5700-28X-LI-24S-AC.

**Table 4-91** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	89.91 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.5 kg (7.72 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	60 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"><li>• Tested according to ATIS standard</li><li>• EEE enabled</li><li>• No PoE power consumption</li></ul>	49.7 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02355271

## 4.4.16 S5700-28X-LI-24S-DC

### Version Mapping

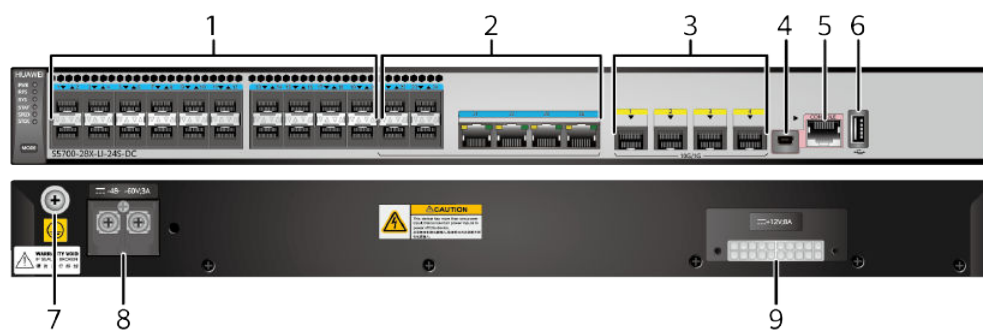
**Table 4-92** lists the mapping between the S5700-28X-LI-24S-DC chassis and software versions.

**Table 4-92** Version mapping

Series	Model	Software Version
S5700-LI	S5700-28X-LI-24S-DC	V200R003C00 to V200R012C00 versions <b>NOTE</b> This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

## Appearance and Structure

**Figure 4-36** S5700-28X-LI-24S-DC appearance



1	<p>Twenty 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>	2	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module (applicable in V200R005C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>	4	One mini USB port
5	One console port	6	One USB port
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	8	<p>DC power terminal</p> <p><b>NOTE</b> It is used together with a <b>DC Power Cable</b>.</p>
9	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <b>RPS cable</b>, which is not hot swappable.</p>	-	-

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-93](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-93** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-94](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-94** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC



Attribute	Description
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-95](#).

**Table 4-95** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

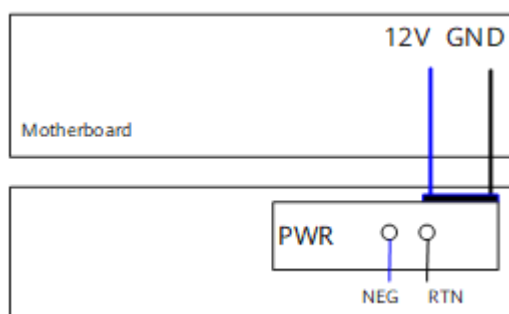
The S5700-28X-LI-24S-DC has the same types of indicators as the S5700-28X-LI-24S-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5700-28X-LI-24S-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

**Figure 4-37** shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

**Figure 4-37** Power supply by a single DC power module



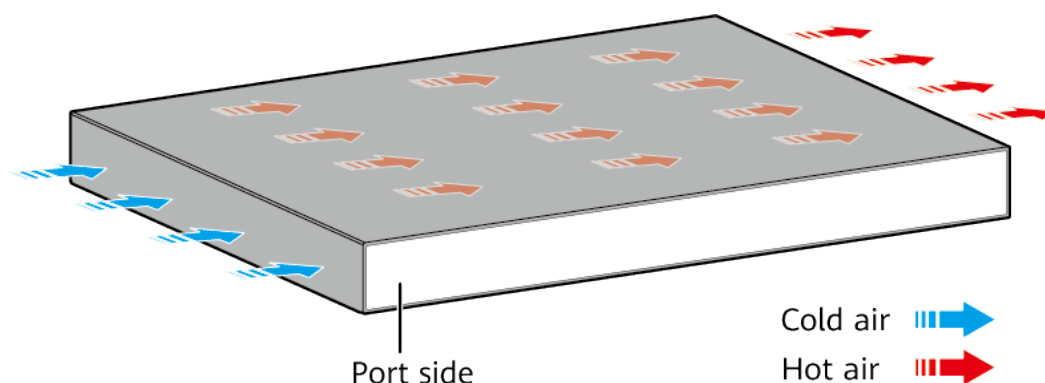
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

## Heat Dissipation

The S5700-28X-LI-24S-DC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-96** lists technical specifications of the S5700-28X-LI-24S-DC.

**Table 4-96** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	89.91 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 1$ kV in differential mode, $\pm 2$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.5 kg (7.72 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	57 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	46.9 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02355303

## 4.4.17 S5701-28X-LI-AC

### Version Mapping

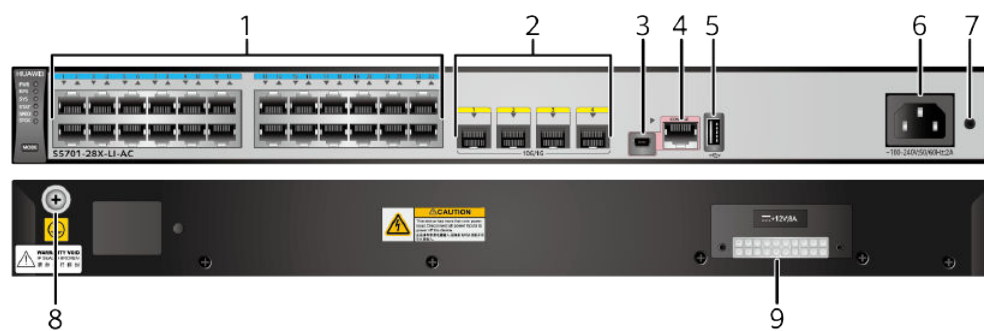
**Table 4-97** lists the mapping between the S5701-28X-LI-AC chassis and software versions.

**Table 4-97** Version mapping

Series	Model	Software Version
S5700-LI	S5701-28X-LI-AC	V200R003C00 to V200R012C00 versions  <b>NOTE</b> This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

## Appearance and Structure

**Figure 4-38** S5701-28X-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module (applicable in V200R005C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>
3	One mini USB port	4	One console port
5	One USB port	6	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .
7	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	8	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .
9	RPS socket <b>NOTE</b> It is used with an <b>RPS cable</b> , which is not hot swappable.	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-98](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-98** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-99](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-99** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-100](#).

**Table 4-100** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5701-28X-LI-AC has the same types of indicators as the S5700-28X-LI-AC. For details, see [Indicator Description](#).

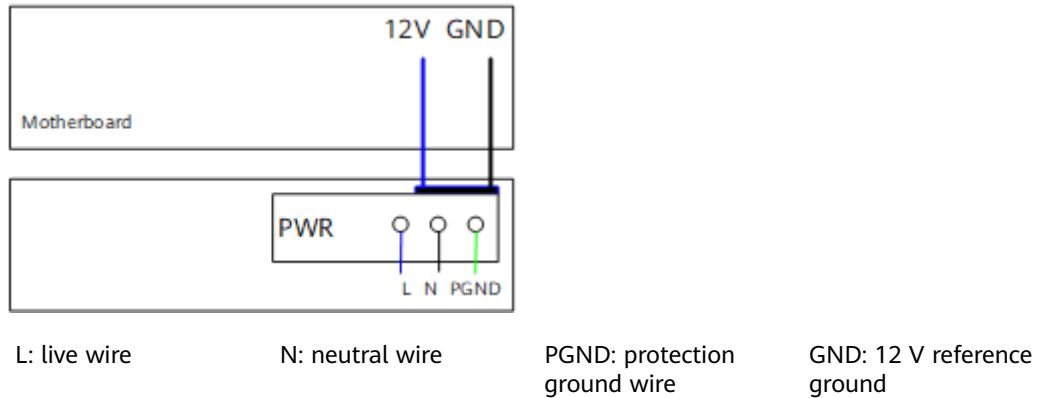
## Power Supply Configuration

The S5701-28X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 4-39](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

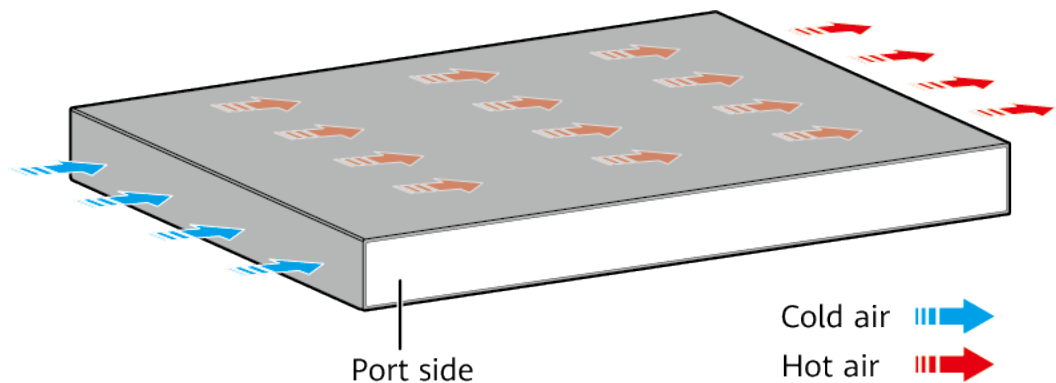


**Figure 4-39** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5701-28X-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-101** lists technical specifications of the S5701-28X-LI-AC.

**Table 4-101** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	70.32 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3 kg (11.02 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	41 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	29.7 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 45.8 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02357675

## 4.4.18 S5701-28X-LI-24S-AC

### Version Mapping

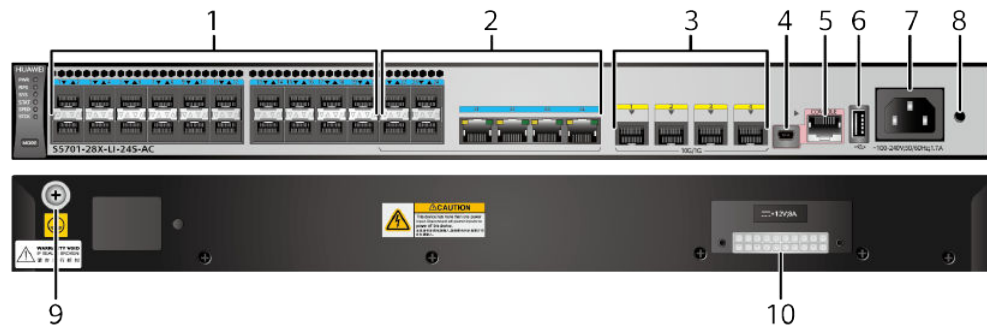
**Table 4-102** lists the mapping between the S5701-28X-LI-24S-AC chassis and software versions.

**Table 4-102** Version mapping

Series	Model	Software Version
S5700-LI	S5701-28X-LI-24S-AC	V200R003C00 to V200R012C00 versions <b>NOTE</b> This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

## Appearance and Structure

Figure 4-40 S5701-28X-LI-24S-AC appearance



1	Twenty 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>
---	---	---	--

3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module (applicable in V200R005C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>	4	One mini USB port
5	One console port	6	One USB port
7	<p>AC socket</p> <p><b>NOTE</b> It is used with an <b>AC power cable</b>.</p>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>
9	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	10	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <b>RPS cable</b>, which is not hot swappable.</p>

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-103](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-103** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-104](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-104** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-105](#).

**Table 4-105** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

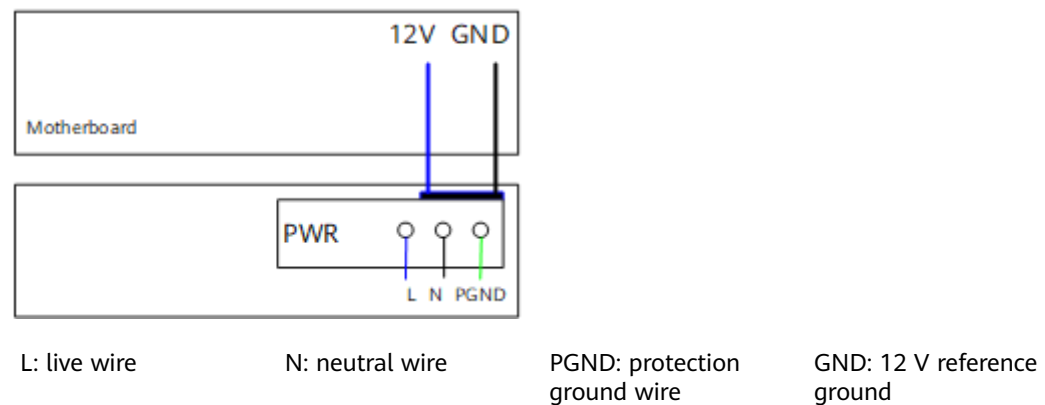
The S5701-28X-LI-24S-AC has the same types of indicators as the S5700-28X-LI-24S-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5701-28X-LI-24S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

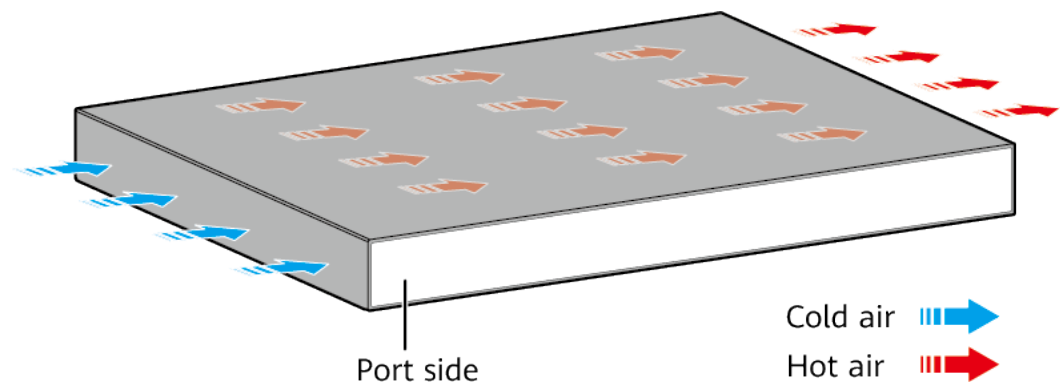
**Figure 4-41** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-41** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5701-28X-LI-24S-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.



## Technical Specifications

**Table 4-106** lists technical specifications of the S5701-28X-LI-24S-AC.

**Table 4-106** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	89.91 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.5 kg (7.72 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	60 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	49.7 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02357676

## 4.4.19 S5700-52X-LI-AC

### Version Mapping

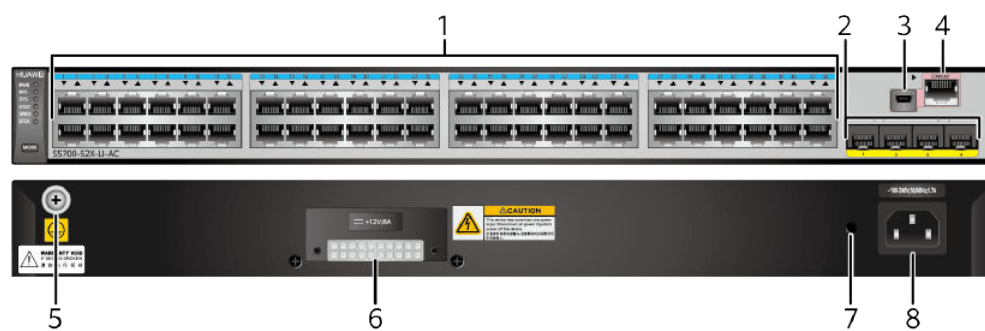
**Table 4-107** lists the mapping between the S5700-52X-LI-AC chassis and software versions.

**Table 4-107** Version mapping

Series	Model	Software Version
S5700-LI	S5700-52X-LI-AC	V200R002C00 to V200R012C00 versions  <b>NOTE</b> This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

## Appearance and Structure

**Figure 4-42** S5700-52X-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module (applicable in V200R005C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables (applicable in V200R003C00 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>
3	One mini USB port	4	One console port
5	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	6	RPS socket <b>NOTE</b> It is used with an <b>RPS cable</b> , which is not hot swappable.
7	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	8	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 4-108** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-108** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-109](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-109** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-110](#).

**Table 4-110** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

## Indicator Description

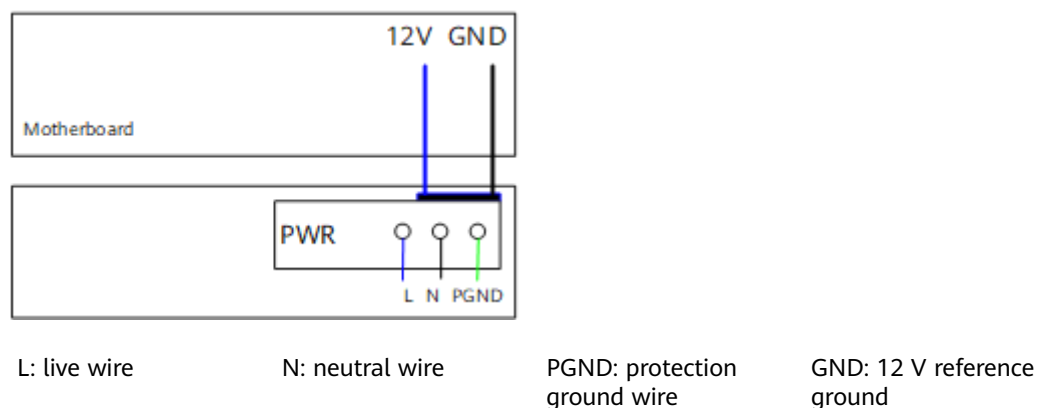
The S5700-52X-LI-AC has the same types of indicators as the S5700-28X-LI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5700-52X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

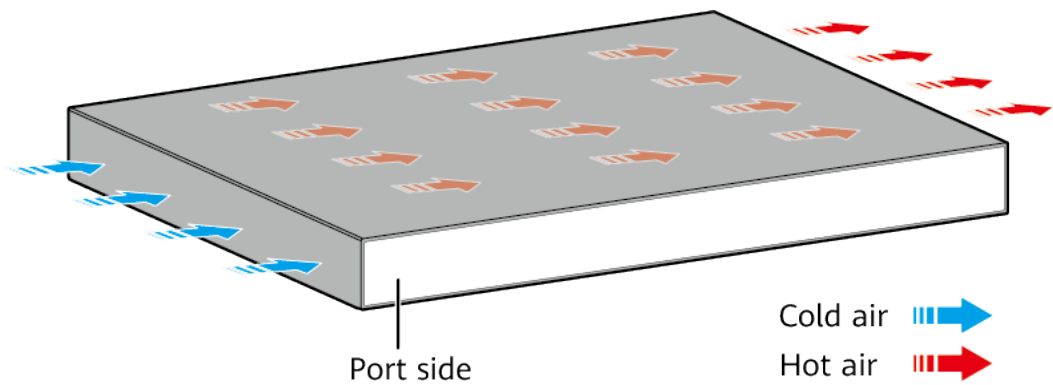
[Figure 4-43](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-43** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5700-52X-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-111** lists technical specifications of the S5700-52X-LI-AC.

**Table 4-111** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	61.86 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	4.4 kg (9.7 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported

Item	Description
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	61 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	45.5 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 47.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02354216



## 4.4.20 S5700-52X-LI-DC

### Version Mapping

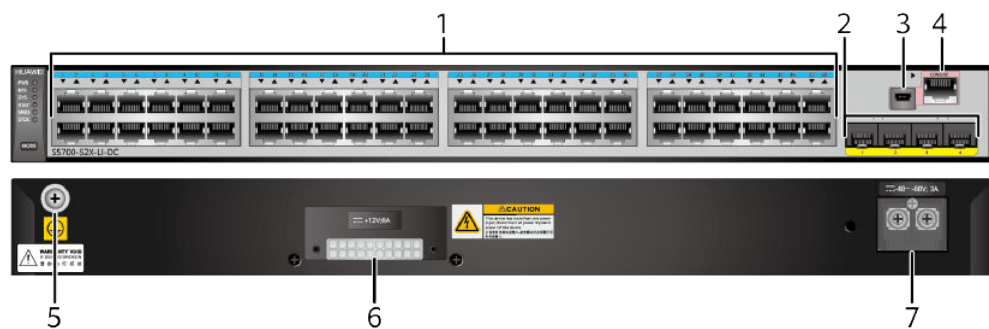
**Table 4-112** lists the mapping between the S5700-52X-LI-DC chassis and software versions.

**Table 4-112** Version mapping

Series	Model	Software Version
S5700-LI	S5700-52X-LI-DC	V200R002C00 to V200R012C00 versions  <b>NOTE</b> This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

### Appearance and Structure

**Figure 4-44** S5700-52X-LI-DC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module (applicable in V200R005C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables (applicable in V200R003C00 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>
3	One mini USB port	4	One console port
5	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	6	RPS socket <b>NOTE</b> It is used with an <b>RPS cable</b> , which is not hot swappable.
7	DC power terminal <b>NOTE</b> It is used together with a <b>DC Power Cable</b> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 4-113** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-113** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-114](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-114** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-115](#).

**Table 4-115** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

## Indicator Description

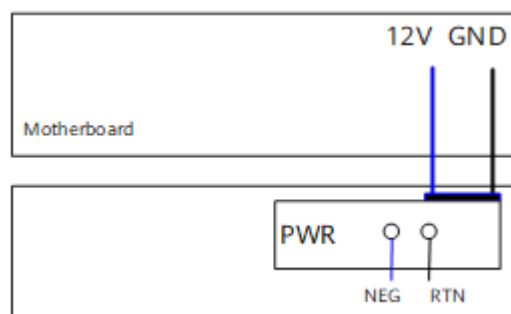
The S5700-52X-LI-DC has the same types of indicators as the S5700-28X-LI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5700-52X-LI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 4-45](#) shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

**Figure 4-45** Power supply by a single DC power module



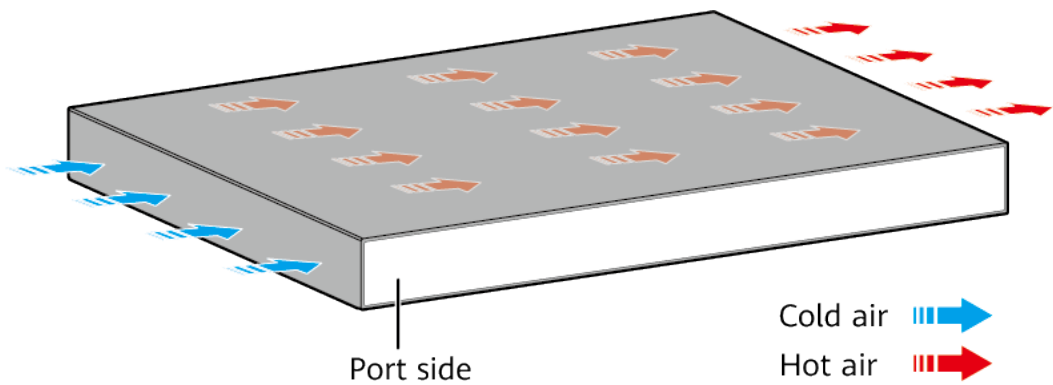
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

## Heat Dissipation

The S5700-52X-LI-DC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-116** lists technical specifications of the S5700-52X-LI-DC.

**Table 4-116** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	61.86 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 1$ kV in differential mode, $\pm 2$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	4.3 kg (9.48 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported

Item	Description
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	60 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"><li>• Tested according to ATIS standard</li><li>• EEE enabled</li><li>• No PoE power consumption</li></ul>	42.2 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 47.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02354235

## 4.4.21 S5700-52X-PWR-LI-AC

### Version Mapping

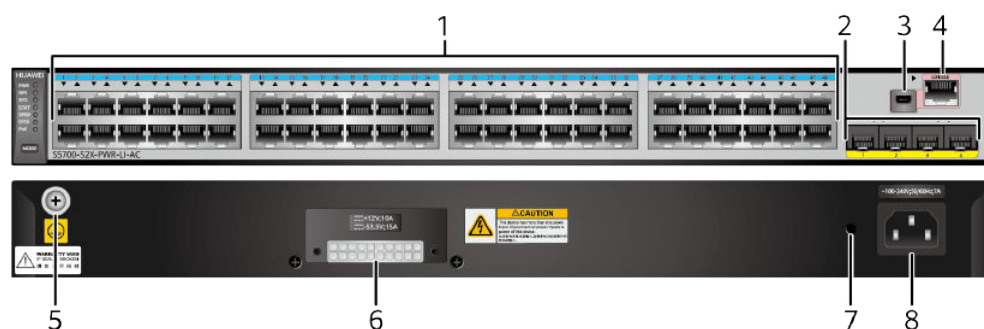
**Table 4-117** lists the mapping between the S5700-52X-PWR-LI-AC chassis and software versions.

**Table 4-117** Version mapping

Series	Model	Software Version
S5700-LI	S5700-52X-PWR-LI-AC	V200R002C00 to V200R012C00 versions  <b>NOTE</b> This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

### Appearance and Structure

**Figure 4-46** S5700-52X-PWR-LI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module (applicable in V200R005C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables (applicable in V200R003C00 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>
3	One mini USB port	4	One console port
5	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	6	<p>RPS socket</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• It is used with an <b>RPS cable</b> which is not hot swappable.</li> <li>• A PoE switch can have an RPS power supply connected to this socket to provide inputs for system power supply and PoE power supply. The two inputs are independent of each other. The RPS power supply can also be used as a backup of the system power supply when it does not provide PoE power.</li> </ul>
7	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>	8	<p>AC socket</p> <p><b>NOTE</b> It is used with an <b>AC power cable</b>.</p>



## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-118](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-118** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-119](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-119** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-120](#).

**Table 4-120** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

## Indicator Description

The S5700-52X-PWR-LI-AC has the same types of indicators as the S5700-28X-PWR-LI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

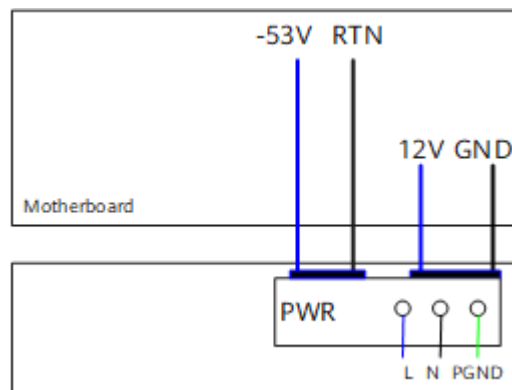
The S5700-52X-PWR-LI-AC has a built-in power module and does not support pluggable power modules. It can provide PoE power supply and connect to an RPS1800 power supply for power redundancy. [Table 4-121](#) lists its power supply configurations.

**Table 4-121** Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
No RPS used	369.6 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 12</li> </ul>
RPS used	800 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 26</li> </ul>

[Figure 4-47](#) shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

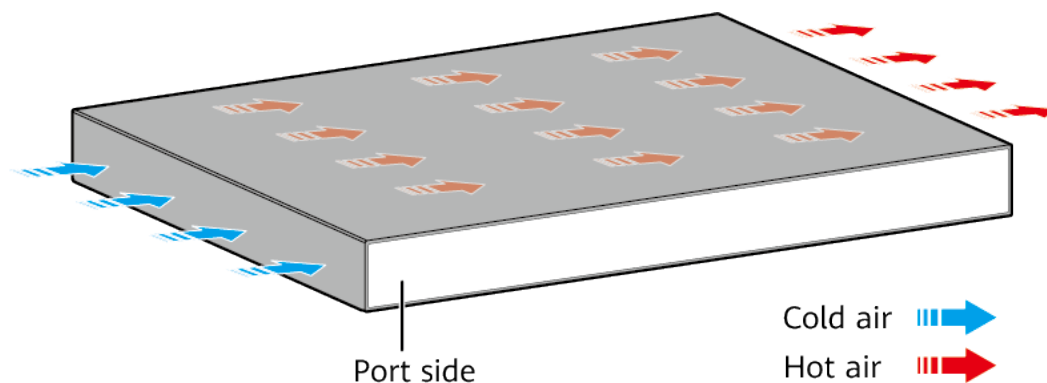
**Figure 4-47** Power supply by a built-in AC PoE power module



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5700-52X-PWR-LI-AC has three built-in fans for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-122** lists technical specifications of the S5700-52X-PWR-LI-AC.

**Table 4-122** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB

Item	Description
Mean time between failures (MTBF)	40.72 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	4.8 kg (10.58 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	479.3 W (system power consumption: 109.3 W, PoE: 370 W)
Typical power consumption (30% of traffic load)	48.6 W
<ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	

Item	Description
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02354218

## 4.4.22 S5700-52X-LI-48CS-AC

### Version Mapping

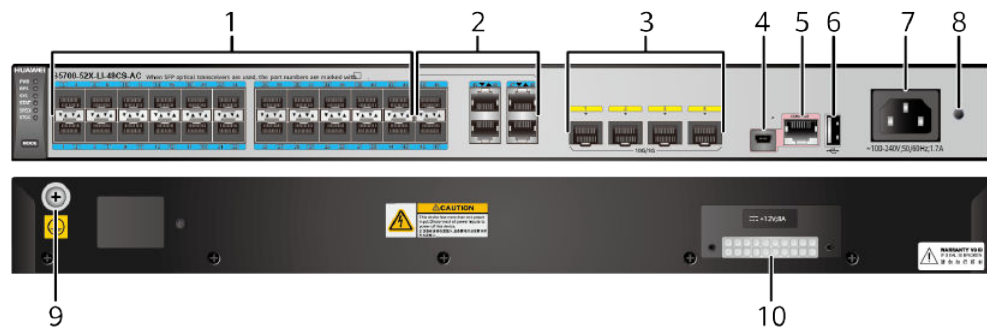
**Table 4-123** lists the mapping between the S5700-52X-LI-48CS-AC chassis and software versions.

**Table 4-123** Version mapping

Series	Model	Software Version
S5700-LI	S5700-52X-LI-48CS-AC	V200R003C02 to V200R012C00 versions <b>NOTE</b> This model does not match V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

## Appearance and Structure

Figure 4-48 S5700-52X-LI-48CS-AC appearance



<p>1 Forty-four 100/1000BASE-X CSFP ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>CSFP optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• When all the ports have CSFP optical modules installed, each port functions as two ports. The switch has a total of 44 ports in this case.</li> <li>• When all the ports have SFP optical modules installed, each port functions as one port. The switch has a total of 22 ports.</li> </ul>	<p>2 Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>CSFP optical module</b></li> </ul> <p><b>NOTE</b></p> <p>The four combo ports (numbered 45, 46, 47, and 48) on a CSFP switch include four electrical ports and two optical ports. The two optical ports can function as four optical modules when they have Compact Small Form-Factor Pluggable (CSFP) optical modules installed. When the two optical ports have SFP optical modules installed, the electrical ports 45 and 48 can be used normally.</p>
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module (applicable in V200R005C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>	4	One mini USB port
5	One console port	6	One USB port
7	<p>AC socket</p> <p><b>NOTE</b> It is used with an <b>AC power cable</b>.</p>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>
9	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	10	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <b>RPS cable</b>, which is not hot swappable.</p>

## Port Description

### 100/1000BASE-X CSFP port

A 100/1000BASE-X CSFP port can send and receive data at 100 Mbit/s or 1000 Mbit/s. When using a CSFP optical module, each 100/1000BASE-X CSFP port works as two ports. When using an SFP optical module, each 100/1000BASE-X CSFP port works as one port. **Table 4-124** describes the attributes of a 100/1000BASE-X CSFP port.

**Table 4-124** Attributes of a 100/1000BASE-X CSFP port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s

 **NOTE**

CSFP ports using CSFP optical modules cannot connect to each other. A CSFP optical module must be connected to two BIDI SFP optical modules using two optical fibers. You can install an SFP optical module on a CSFP port and use it as a common SFP port.

**Combo port**

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

**10GE SFP+ port**

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-125](#) describes the attributes of a 10GE SFP+ Ethernet optical port.



**Table 4-125** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-126](#).

**Table 4-126** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

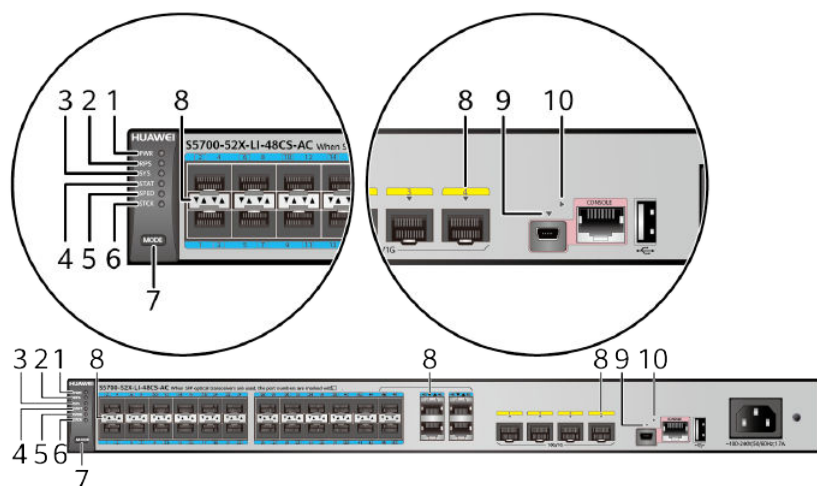
## Indicator Description

### NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-49** Indicators on the S5700-52X-LI-48CS-AC



**Table 4-127** Description of indicators on the switch

Number	Indicator/Button	Color	Description
1	PWR: internal power supply indicator	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the RPS system.
2	RPS: RPS power supply indicator	-	Off: No RPS is connected to the switch.

Number	Indicator/ Button	Color	Description
		Green	<ul style="list-style-type: none"> <li>Steady on: The RPS is in cold backup state.</li> <li>Blinking: The RPS is providing power for another device.</li> </ul>
		Yellow	Blinking: The RPS is providing power for the switch and the built-in power module of the switch is faulty.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> <li>Fast blinking: The system is starting or is copying the system software and configuration file from a USB flash drive during a USB-based upgrade.</li> <li>Slow blinking: The system is running normally.</li> </ul>
		Yellow	Blinking: The switch has restarted after a successful upgrade using a USB flash drive. You can remove the USB flash drive from the switch.
		Red	<ul style="list-style-type: none"> <li>Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.</li> <li>Blinking: The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.</li> </ul>
4	STAT: status indicator	Green	<ul style="list-style-type: none"> <li>Off: The status mode is not selected.</li> <li>Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.</li> </ul>

Number	Indicator/Button	Color	Description
5	SPED: speed indicator	Green	<ul style="list-style-type: none"><li>• Off: The speed mode is not selected.</li><li>• Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.</li></ul>
6	STCK: stack indicator	Green	<p>If you are not changing the indicator mode (default):</p> <ul style="list-style-type: none"><li>• Off: The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li><li>• Blinking: The switch is a stack master switch or a standalone switch with the stacking function enabled.</li></ul> <p>If you are changing the indicator mode:</p> <ul style="list-style-type: none"><li>• Off: The stack mode is not selected.</li><li>• Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.</li><li>• Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li></ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

Number	Indicator/Button	Color	Description
7	MODE: mode switch button	-	<ul style="list-style-type: none"><li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li><li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li><li>When you press this button a third time, the service port indicators restore to the default mode, and the STAT mode turns green.</li></ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	Service port indicator <b>NOTE</b> Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-128</a> .
9	Mini USB indicator	Green	<ul style="list-style-type: none"><li>Off: The Mini USB port is not active, and the console port is active.</li><li>Steady on: The Mini USB port is active.</li></ul> <p>When this indicator is on, the console indicator is off.</p>

Number	Indicator/Button	Color	Description
10	Console indicator	Green	<ul style="list-style-type: none"> <li>Off: The console port is not active, and the Mini USB port is active.</li> <li>Steady on (default): The console port is active.</li> </ul> When this LED is on, the Mini USB port indicator is off.

**Table 4-128** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>

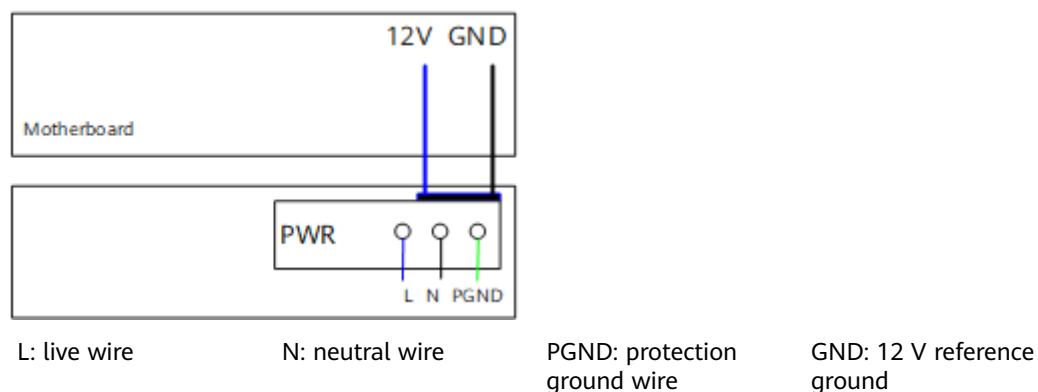
Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5700-52X-LI-48CS-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

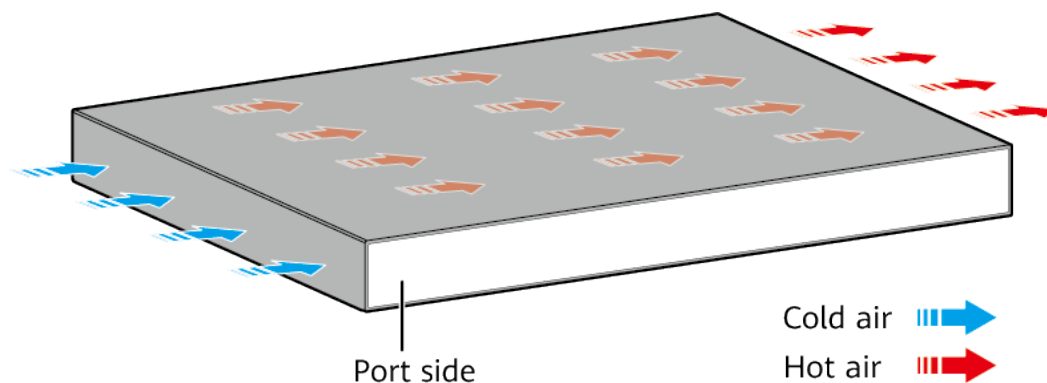
**Figure 4-50** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-50** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5700-52X-LI-48CS-AC has three built-in fans for forced air cooling. The airflow direction is left-to-right.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-129** lists technical specifications of the S5700-52X-LI-48CS-AC.

**Table 4-129** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	92.57 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Combo electrical port: $\pm 2$ kV in common mode
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.4 kg (7.5 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	79.93 W



Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	69.17 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 67.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02357823

## 4.5 S5700S-LI

### 4.5.1 S5700S-28P-LI-AC

#### Version Mapping

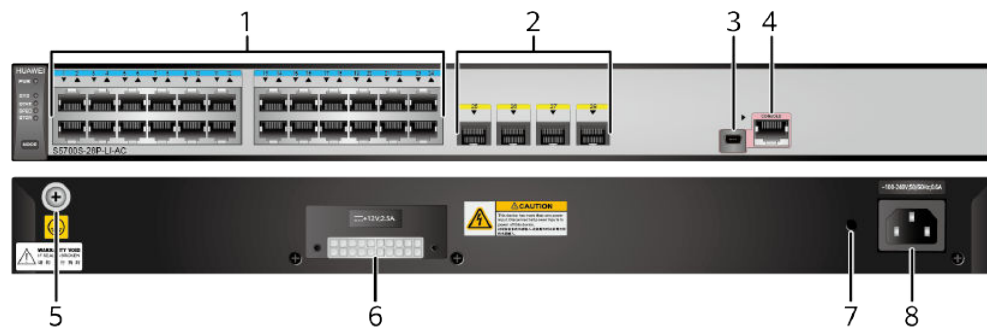
**Table 4-130** lists the mapping between the S5700S-28P-LI-AC chassis and software versions.

**Table 4-130** Version mapping

Series	Model	Software Version
S5700S-LI	S5700S-28P-LI-AC	V200R001C00 to V200R012C00 versions <b>NOTE</b> This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

## Appearance and Structure

**Figure 4-51** S5700S-28P-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (applicable in V200R002C00 and later versions, works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>
3	One mini USB port	4	One console port
5	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	6	RPS socket <b>NOTE</b> It is used with an <b>RPS cable</b> , which is not hot swappable.
7	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	8	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-131](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-131** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-132](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-132** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-133](#).

**Table 4-133** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

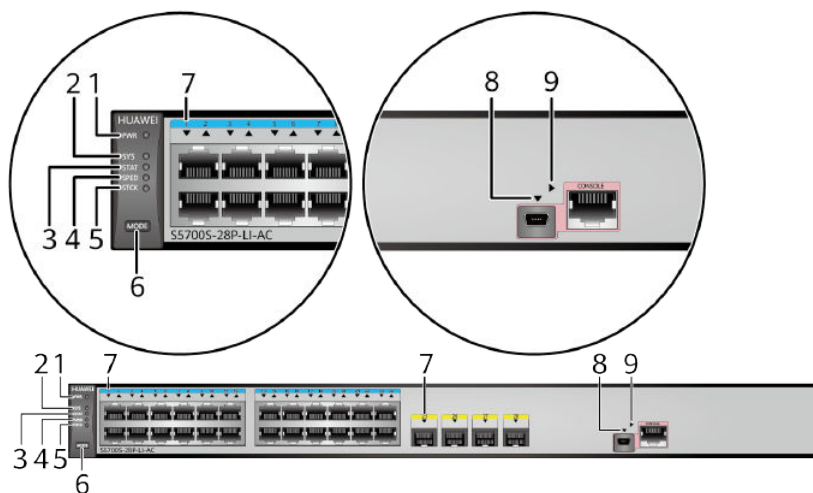
## Indicator Description

### NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-52** Indicators on the S5700S-28P-LI-AC



**Table 4-134** Description of indicators on the switch

Number	Indicator/ Button	Color	Description
1	PWR: built-in power module indicator	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the RPS system.
2	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> <li>Fast blinking: The system is starting.</li> <li>Slow blinking: The system is operating properly.</li> </ul>
		Yellow	Blinking: The system is in the sleep state. <b>NOTE</b> The system can wake from the sleeping state if you press the MODE button.
		Red	Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.
3	STAT: status indicator	Green	<ul style="list-style-type: none"> <li>Off: The status mode is not selected.</li> <li>Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.</li> </ul>
4	SPED: speed indicator	Green	<ul style="list-style-type: none"> <li>Off: The speed mode is not selected.</li> <li>Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>

Number	Indicator/ Button	Color	Description
5	STCK: stack indicator	-	Currently, the switch does not support stacking. This indicator is reserved for the stacking function.
6	MODE: mode switch button	-	<ul style="list-style-type: none"> <li>When you press this button once, the SPED indicator turns green and the service port indicators show the speed of each service port.</li> <li>When you press the button a second time, the STAT indicator turns green.</li> </ul> <p>If you do not press the button within 45 seconds, the indicators restore to the default states. That is, the STAT indicator turns green, and the SPED and STCK indicators are off.</p>
7	Service port indicator <ul style="list-style-type: none"> <li>GE electrical ports: The ports are numbered from bottom to top and left to right, starting with 1.</li> <li>GE optical ports: Each port has an indicator above it.</li> </ul>	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-135</a> .	
8	Mini USB indicator	Green	<ul style="list-style-type: none"> <li>Off: The Mini USB port is not active, and the console port is active.</li> <li>Steady on: The Mini USB port is active.</li> </ul> <p>When this indicator is on, the console indicator is off.</p>

Number	Indicator/Button	Color	Description
9	Console indicator	Green	<ul style="list-style-type: none"> <li>Off: The console port is not active, and the Mini USB port is active.</li> <li>Steady on (default): The console port is active.</li> </ul> <p>When this LED is on, the Mini USB port indicator is off.</p>

**Table 4-135** Description of service port indicators in different modes

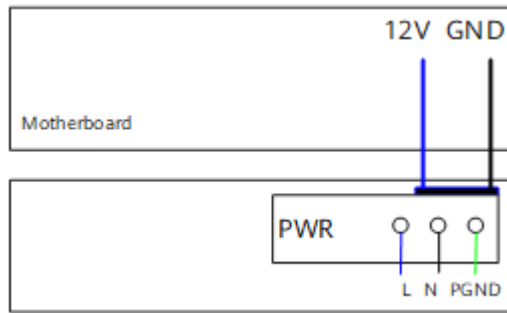
Display Mode	Color	Description
Status	Green	<ul style="list-style-type: none"> <li>Off: The port is not connected or has been shut down.</li> <li>Steady on: The port is connected.</li> <li>Blinking: The port is sending or receiving data.</li> </ul>
Speed	Green	<ul style="list-style-type: none"> <li>Off: The port is not connected or has been shut down.</li> <li>Steady on: <ul style="list-style-type: none"> <li>10M/100M/1000M port: The port is operating at 10/100 Mbit/s.</li> <li>1000M/10GE port: The port is operating at 1000 Mbit/s.</li> </ul> </li> <li>Blinking: <ul style="list-style-type: none"> <li>10M/100M/1000M port: The port is operating at 1000 Mbit/s.</li> <li>1000M/10GE port: The port is operating at 10 Gbit/s.</li> </ul> </li> </ul>

## Power Supply Configuration

The S5700S-28P-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

**Figure 4-53** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-53** Power supply mode of a built-in AC power module



L: live wire

N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

## Heat Dissipation

The S5700S-28P-LI-AC has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-136** lists technical specifications of the S5700S-28P-LI-AC.

**Table 4-136** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none"> <li>V200R001: 64 MB</li> <li>V200R002 and later versions: 200 MB</li> </ul>
Mean time between failures (MTBF)	49.69 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	2.8 kg (6.17 lb)



Item	Description
Stack ports	Not supported
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	24 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	19.3 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 45°C (32°F to 113°F) when it uses SFP optical modules with 80 km or longer transmission distances.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02353836

## 4.5.2 S5700S-28P-PWR-LI-AC

### Version Mapping

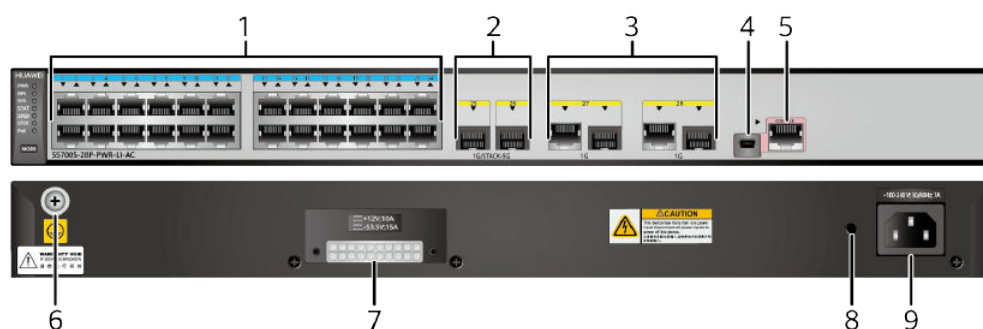
[Table 4-137](#) lists the mapping between the S5700S-28P-PWR-LI-AC chassis and software versions.

**Table 4-137** Version mapping

Series	Model	Software Version
S5700S-LI	S5700S-28P-PWR-LI-AC	V200R008C00 to V200R012C00 versions

### Appearance and Structure

**Figure 4-54** S5700S-28P-PWR-LI-AC appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Two 1000BASE-X ports  Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only used for stack connection)</b></li> <li>• <b>1 m and 10 m SFP+ copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m AOC cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>
3	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>	4	One mini USB port
5	One console port	6	Ground screw  <b>NOTE</b> It is used with a <b>ground cable</b> .

7	<p>RPS socket</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>It is used with an <b>RPS cable</b> which is not hot swappable.</li> <li>A PoE switch can have an RPS power supply connected to this socket to provide inputs for system power supply and PoE power supply. The two inputs are independent of each other. The RPS power supply can also be used as a backup of the system power supply when it does not provide PoE power.</li> </ul>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b></p> <p>The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p><b>NOTE</b></p> <p>It is used with an <b>AC power cable</b>.</p>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 4-138](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-138** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-139](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-139** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-140](#).

**Table 4-140** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

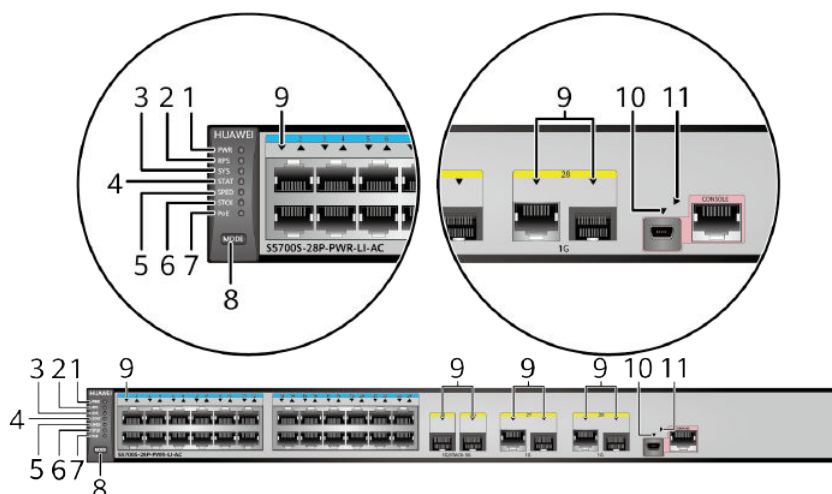
## Indicator Description

### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-55 Indicators on the S5700S-28P-PWR-LI-AC



**Table 4-141** Description of indicators on the switch

Number	Indicator/ Button	Color	Description
1	PWR: internal power supply indicator	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the RPS system.
2	RPS: RPS power supply indicator	-	Off: No RPS is connected to the switch.
		Green	<ul style="list-style-type: none"> <li>Steady on: The RPS is in cold backup state or forced power-on state.</li> <li>Blinking: The RPS is providing power for another device.</li> </ul>
		Yellow	<ul style="list-style-type: none"> <li>Steady on: The RPS is in alarm state. (No 870 W PoE power module is available in the RPS1800 or the RPS1800 cannot provide power supply to the local switch at this time.)</li> <li>Blinking: The RPS is providing power for the switch and the built-in power module of the switch is faulty.</li> </ul>
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> <li>Fast blinking: The system is starting.</li> <li>Slow blinking: The system is running normally.</li> </ul>
		Red	Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.
4	STAT: status indicator	Green	<ul style="list-style-type: none"> <li>Off: The status mode is not selected.</li> <li>Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.</li> </ul>

Number	Indicator/ Button	Color	Description
5	SPED: speed indicator	Green	<ul style="list-style-type: none"><li>Off: The speed mode is not selected.</li><li>Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.</li></ul>
6	STCK: stack indicator	Green	<p>If you are not changing the indicator mode (default):</p> <ul style="list-style-type: none"><li>Off: The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li><li>Blinking: The switch is a stack master switch or a standalone switch with the stacking function enabled.</li></ul> <p>If you are changing the indicator mode:</p> <ul style="list-style-type: none"><li>Off: The stack mode is not selected.</li><li>Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.</li><li>Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li></ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE: PoE indicator	Green	<ul style="list-style-type: none"><li>Off: The PoE mode is not selected.</li><li>Steady on: The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.</li></ul>



Number	Indicator/ Button	Color	Description
8	MODE: mode switch button	-	<ul style="list-style-type: none"> <li>• When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>• When you press the button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>• When you press the button a third time, the service port indicators change to PoE mode and show the PoE status of ports.</li> <li>• When you press the button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	Service port indicator <ul style="list-style-type: none"> <li>• GE electrical ports: The ports are numbered from bottom to top and left to right, starting with 1.</li> <li>• 10GE optical ports: Each port has an indicator above it.</li> </ul>		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-142</a> .

Number	Indicator/ Button	Color	Description
10	Mini USB indicator	Green	<ul style="list-style-type: none"> <li>Off: The Mini USB port is not active, and the console port is active.</li> <li>Steady on: The Mini USB port is active.</li> </ul> When this indicator is on, the console indicator is off.
11	Console indicator	Green	<ul style="list-style-type: none"> <li>Off: The console port is not active, and the Mini USB port is active.</li> <li>Steady on (default): The console port is active.</li> </ul> When this LED is on, the Mini USB port indicator is off.

**Table 4-142** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.

Display Mode	Color	Status	Description
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> <li>The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.</li> <li>The total power consumption of PDs has reached the maximum power of the switch.</li> <li>The manual power management mode is used and the port is not enabled to provide power to the PD.</li> </ul>
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

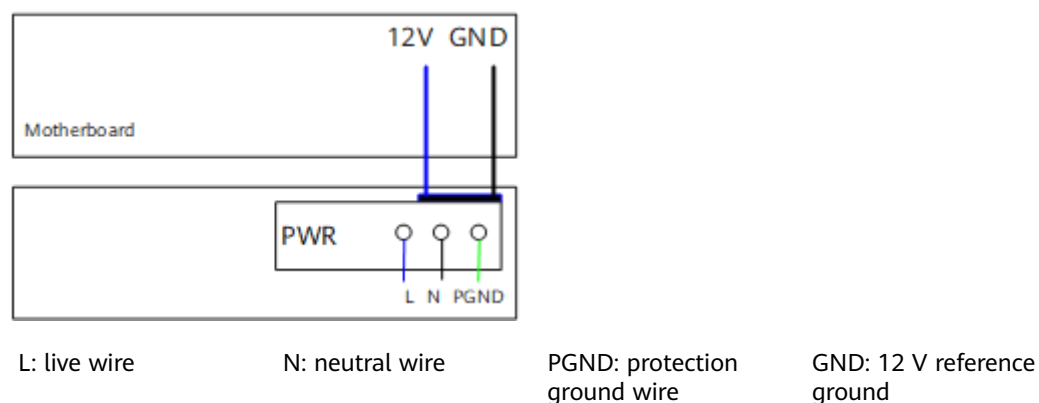
The S5700S-28P-PWR-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy. [Table 4-143](#) lists its power supply configurations.

**Table 4-143** Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
No RPS used	369.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
RPS used	800 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>

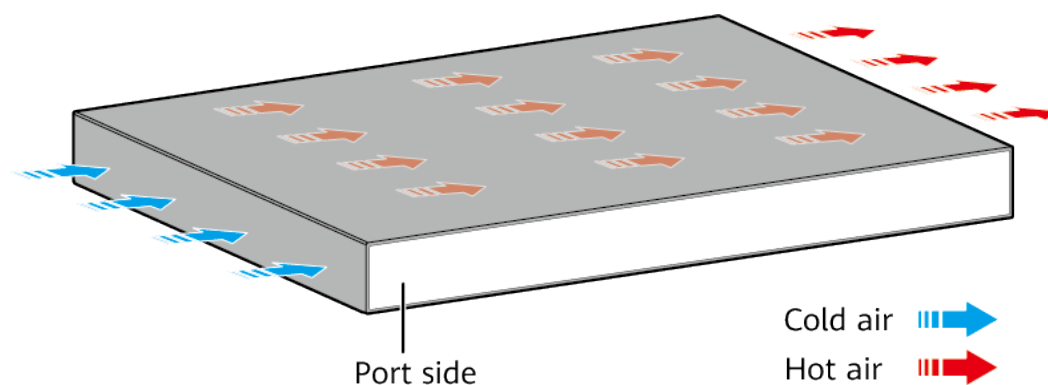
**Figure 4-56** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-56** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5700S-28P-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-144](#) lists technical specifications of the S5700S-28P-PWR-LI-AC.

**Table 4-144** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	46.2 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	5.8 kg (12.79 lb)
Stack ports	Two uplink 1000BASE-X optical ports (non-combo ports)
RTC	Supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"><li>Not providing the PoE function: 45.8 W</li><li>100% PoE loads: 469.7 W (system power consumption: 100.1 W, PoE: 369.6 W)</li></ul>

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	32 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 48 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010562

### 4.5.3 S5700S-52P-LI-AC

#### Version Mapping

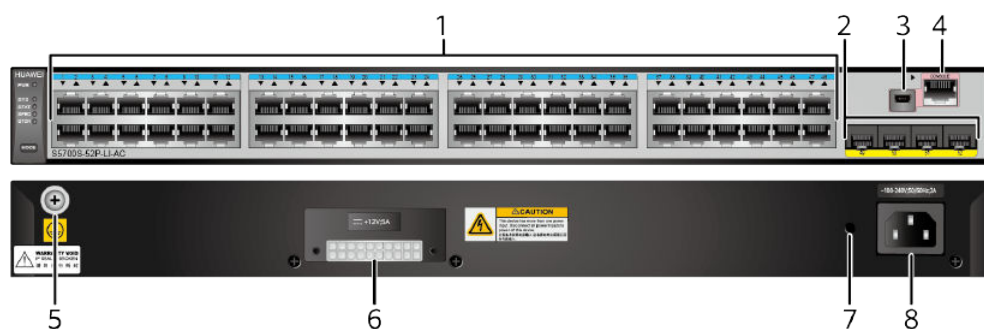
**Table 4-145** lists the mapping between the S5700S-52P-LI-AC chassis and software versions.

**Table 4-145** Version mapping

Series	Model	Software Version
S5700S-LI	S5700S-52P-LI-AC	V200R001C00 to V200R012C00 versions <b>NOTE</b> This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

## Appearance and Structure

**Figure 4-57** S5700S-52P-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (applicable in V200R002C00 and later versions, works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>
3	One mini USB port	4	One console port
5	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	6	RPS socket <b>NOTE</b> It is used with an <b>RPS cable</b> , which is not hot swappable.

7	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	8	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-146](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-146** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-147](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-147** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port



The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-148](#).

**Table 4-148** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

## Indicator Description

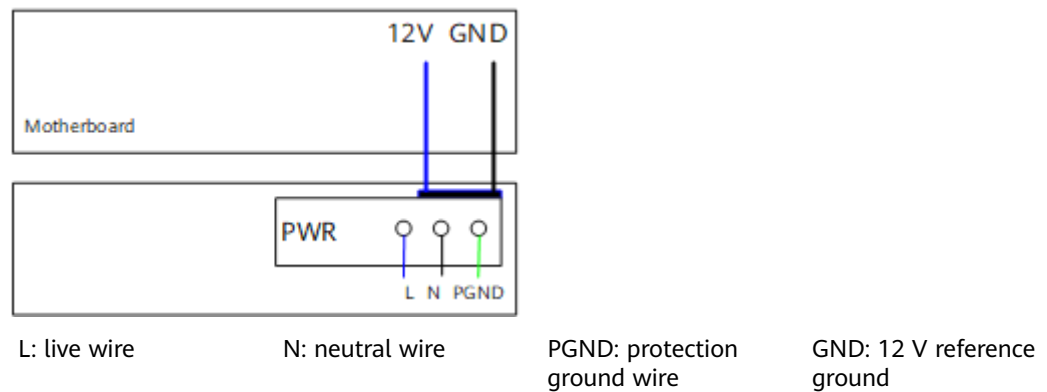
The S5700S-52P-LI-AC has the same types of indicators as the S5700S-28P-LI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5700S-52P-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

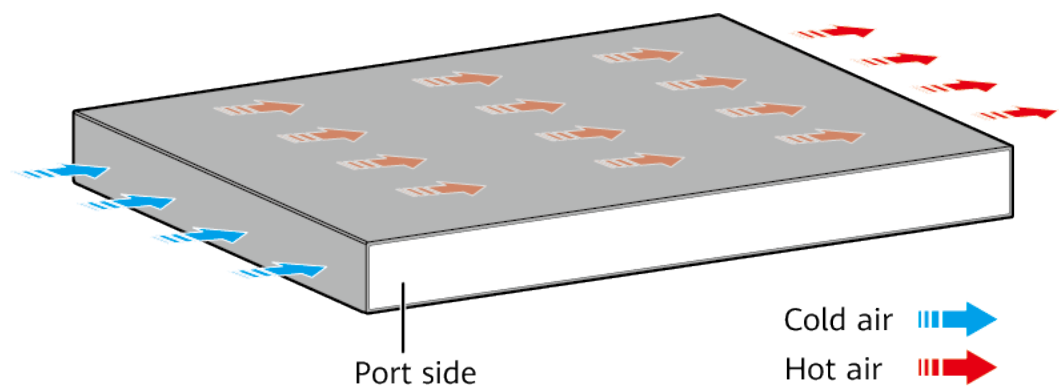
[Figure 4-58](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-58** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5700S-52P-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-149** lists technical specifications of the S5700S-52P-LI-AC.

**Table 4-149** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none"> <li>• V200R001: 64 MB</li> <li>• V200R002 and later versions: 200 MB</li> </ul>
Mean time between failures (MTBF)	39.26 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	3.5 kg (7.72 lb)
Stack ports	Not supported
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	48.4 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	32.5 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 43.8 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02353835

## 4.5.4 S5700S-28X-LI-AC

### Version Mapping

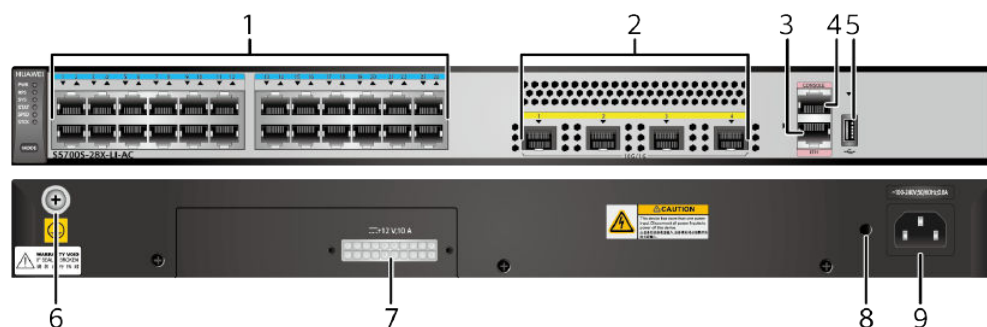
**Table 4-150** lists the mapping between the S5700S-28X-LI-AC chassis and software versions.

**Table 4-150** Version mapping

Series	Model	Software Version
S5700S-LI	S5700S-28X-LI-AC	V200R008C00 to V200R012C00 versions

### Appearance and Structure

**Figure 4-59** S5700S-28X-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (a maximum transmission distance of 10 km, OSXD22N00 not supported)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b> If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	One console port
5	One USB port	6	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>
7	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <b>RPS cable</b>, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>

9	AC socket  <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-151](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-151** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-152](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-152** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 4-153](#).

**Table 4-153** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-154](#) describes the attributes of an ETH management port.

**Table 4-154** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

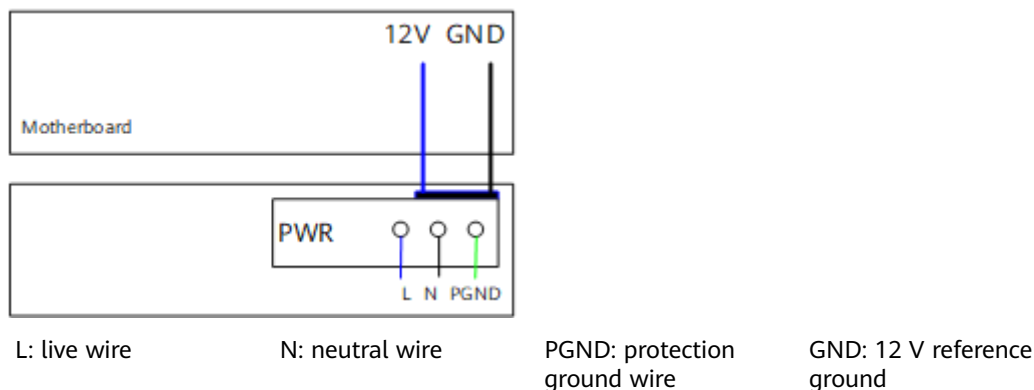
The S5700S-28X-LI-AC has the same types of indicators as the S5700S-52X-LI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5700S-28X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 4-60](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

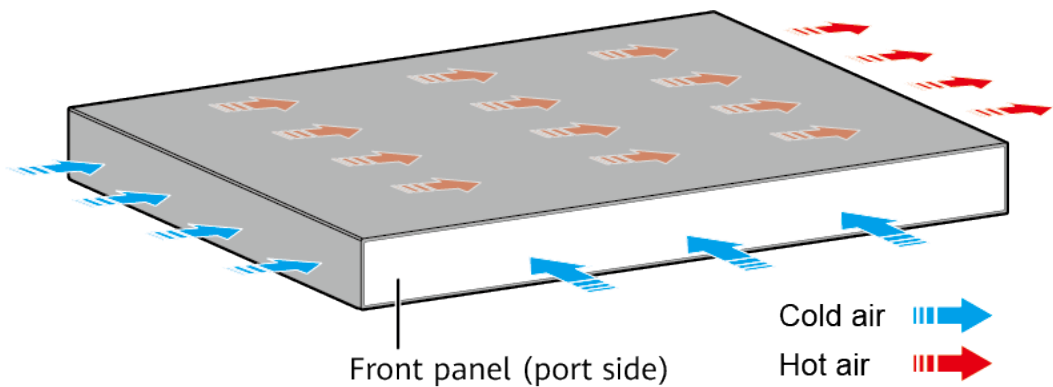
**Figure 4-60** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5700S-28X-LI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.





**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-155** lists technical specifications of the S5700S-28X-LI-AC.

**Table 4-155** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	100.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.8 kg (10.58 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported

Item	Description
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	32 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	22 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350HEC

## 4.5.5 S5700S-52X-LI-AC

### Version Mapping

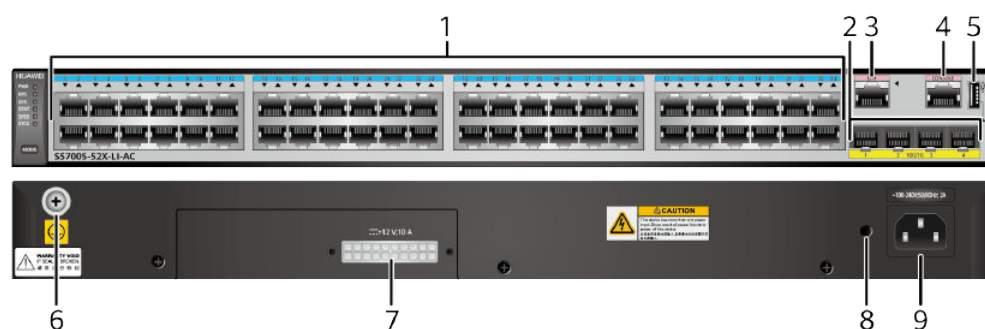
**Table 4-156** lists the mapping between the S5700S-52X-LI-AC chassis and software versions.

**Table 4-156** Version mapping

Series	Model	Software Version
S5700S-LI	S5700S-52X-LI-AC	V200R008C00 to V200R012C00 versions

### Appearance and Structure

**Figure 4-61** S5700S-52X-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b> If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	One console port
5	One USB port	6	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>
7	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <b>RPS cable</b>, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>

9	AC socket  <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-157](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-157** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-158](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-158** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 4-159](#).

**Table 4-159** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-160](#) describes the attributes of an ETH management port.

**Table 4-160** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

**NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

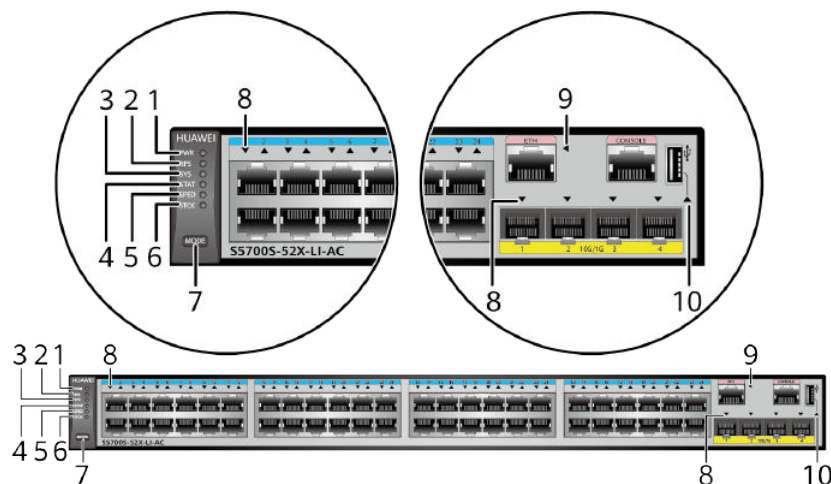
## Indicator Description

**NOTE**

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-62** Indicators on the S5700S-52X-LI-AC



**NOTE**

The S5700S-52X-LI-AC provides a command that can turn on their fault indicators to help field maintenance personnel find a faulty switch.

The SYS indicator and mode indicators (STAT, SPED, and STCK) are used as fault indicators. When an S5700S-52X-LI-AC switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

**Table 4-161** Indicator Description

No.	Indicator/ Button	Color	Description
1	PWR: built-in power module indicator	-	Off: The switch is not powered on.
		Green	Steady on: The power module is supplying power normally.
		Yellow	Steady on: The power module has failed, and the switch is receiving power from a redundant power supply (RPS).
2	RPS: RPS indicator	-	Off: The switch is not connected to an RPS.
		Green	<ul style="list-style-type: none"> <li>Steady on: The RPS is in cold standby state.</li> <li>Blinking: The RPS is supplying power to another switch.</li> </ul>
		Yellow	Blinking: The RPS is supplying power to the local switch, and the built-in power module of the switch has failed.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> <li>Fast blinking: The system is starting.</li> <li>Slow blinking: The system is running normally.</li> </ul>
		Yellow	Blinking: The system is in the sleep state. <b>NOTE</b> The system can wake from the sleeping state if you press the MODE button.
		Red	Steady on: The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT: status indicator	Green	<ul style="list-style-type: none"> <li>Off: The status mode is not selected.</li> <li>Steady on: The status mode (default mode) is selected. In this mode, service port indicators show the port link or activity state.</li> </ul>



No.	Indicator/ Button	Color	Description
5	SPED: speed indicator	Green	<ul style="list-style-type: none"><li>• Off: The speed mode is not selected.</li><li>• Steady on: The speed mode is selected. In this mode, service port indicators show port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.</li></ul>
6	STCK: stack indicator	Green	<p>If you are not changing the indicator mode (default state):</p> <ul style="list-style-type: none"><li>• Off: The switch is the standby or slave switch in a stack or a standalone switch with the stacking function disabled.</li><li>• Blinking: The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li></ul> <p>If you are changing the indicator mode:</p> <ul style="list-style-type: none"><li>• Off: The stack mode is not selected.</li><li>• Steady on: The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.</li><li>• Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li></ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

No.	Indicator/ Button	Color	Description
7	MODE: mode switch button	-	<ul style="list-style-type: none"> <li>• When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>• When you press the button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>• When you press the button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	Service port indicator (one indicator for each port)		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-162</a> .
9	ETH port indicator	Green	<ul style="list-style-type: none"> <li>• Off: The ETH management port is not connected.</li> <li>• Steady on: The ETH management port is connected.</li> <li>• Blinking: The port is sending or receiving data.</li> </ul>
10	USB-based deployment indicator	-	<p>Off:</p> <ul style="list-style-type: none"> <li>• No USB flash drive is connected to the switch.</li> <li>• The USB port is damaged.</li> <li>• The indicator is damaged.</li> <li>• The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>• The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>

No.	Indicator/ Button	Color	Description
		Green	<ul style="list-style-type: none"> <li>Steady on: A USB-based deployment has been completed.</li> <li>Blinking: The system is reading data from a USB flash drive.</li> </ul>
		Yellow	Steady on: The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
		Red	Blinking: An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-162** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.

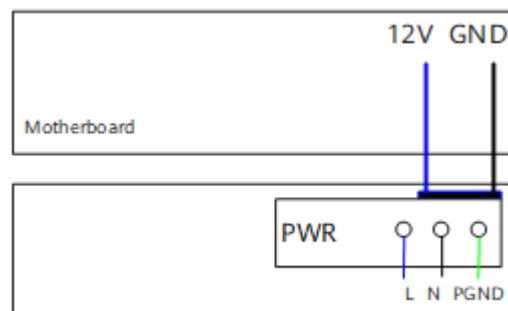
Display Mode	Color	Status	Description
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5700S-52X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

**Figure 4-63** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-63** Power supply mode of a built-in AC power module



L: live wire

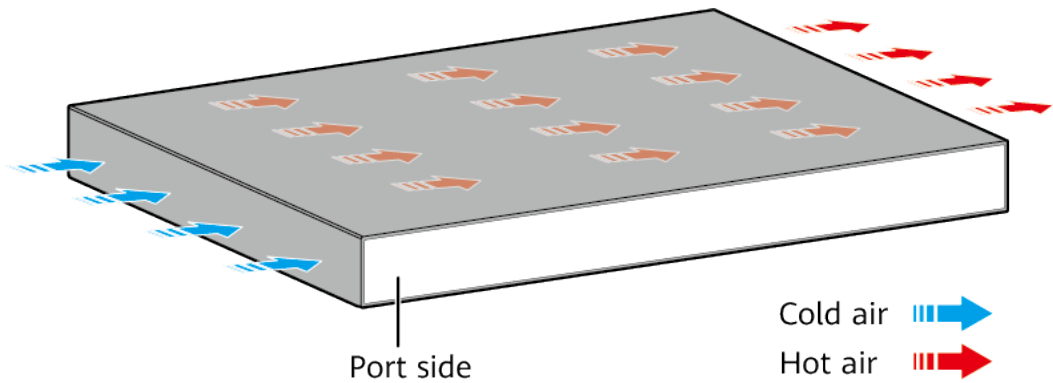
N: neutral wire

PGND: protection ground wire

GND: 12 V reference ground

## Heat Dissipation

The S5700S-52X-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-163** lists technical specifications of the S5700S-52X-LI-AC.

**Table 4-163** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	86.64 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	5 kg (11.02 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported

Item	Description
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	54.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	34.4 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350HED

## 4.6 S5700-LI-BAT

### NOTE

The S5700-28P-LI-BAT and S5700-28P-LI-24S-BAT support internal batteries. For details about the two models, see the *S5700-LI-BAT Hardware Installation and Maintenance Guide*.

### 4.6.1 S5700-28P-LI-BAT

#### Version Mapping

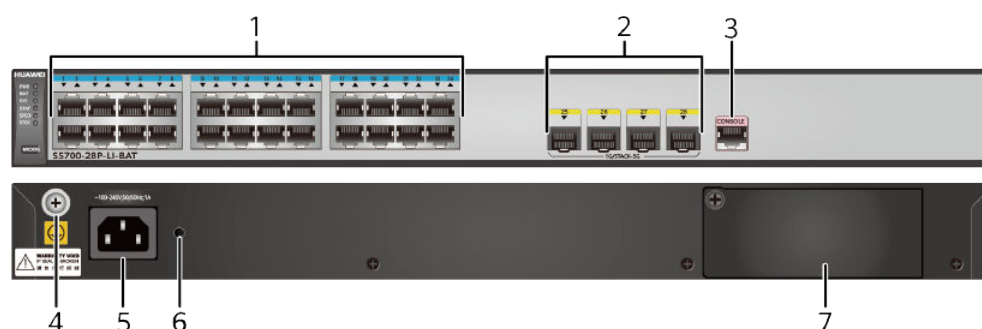
**Table 4-164** lists the mapping between the S5700-28P-LI-BAT chassis and software versions.

**Table 4-164** Version mapping

Series	Model	Software Version
S5700-LI-BAT	S5700-28P-LI-BAT	V200R003C02 to V200R012C00 versions <b>NOTE</b> This model does not match V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

#### Appearance and Structure

**Figure 4-64** S5700-28P-LI-BAT appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>
3	One console port	4	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .
5	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .	6	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
7	Battery slot <b>NOTE</b> Applicable battery modules or power modules: <ul style="list-style-type: none"> <li>• <b>BAT-4AHA rechargeable lithium ion battery module</b></li> <li>• <b>BAT-8AHA rechargeable lithium ion battery module</b></li> <li>• <b>PBB-12AHA lead-acid battery charger module (requiring external lead-acid batteries)</b></li> <li>• <b>150 W AC power module</b></li> <li>• <b>150 W DC power module</b></li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 4-165** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-165** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45



Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-166](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-166** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-167](#).

**Table 4-167** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

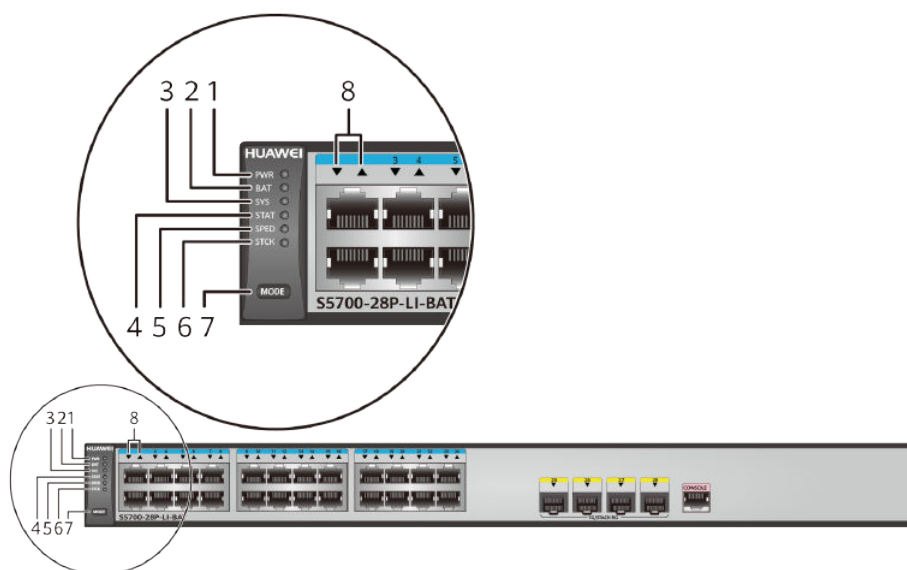
## Indicator Description

### NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-65** Indicators on the S5700-28P-LI-BAT



**Table 4-168** Description of indicators on the S5700-28P-LI-BAT

No.	Indicator/ Button	Color	Description
1	PWR: power supply indicator	-	Off: The switch is not powered on.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power supply has failed, and the switch is powered by a backup power supply.
2	BAT: battery indicator	-	Off: <ul style="list-style-type: none"> <li>No lithium battery is working.</li> <li>No lead-acid battery charger module is working.</li> <li>No power module is working.</li> </ul>
		Green	<ul style="list-style-type: none"> <li>Steady on: The lithium battery, lead-acid battery, or power module is working normally.</li> <li>Fast blinking: The lithium battery is supplying power to the switch.</li> <li>Slow blinking: The switch is charging the lithium battery.</li> </ul>
		Yellow	<p>Steady on:</p> <ul style="list-style-type: none"> <li>The lithium battery does not work normally.</li> <li>The output of the lead-acid battery is abnormal.</li> <li>No lead-acid battery is connected to the lead-acid battery charger module.</li> <li>The power module does not work normally.</li> </ul> <p>Blinking: The lithium battery software is upgrading. (This indicator state is available in V200R005C00 and later versions.)</p>
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> <li>Fast blinking: The system is starting.</li> <li>Slow blinking: The system is running normally.</li> </ul>

No.	Indicator/ Button	Color	Description
		Red	Steady on: The system is not running normally or has generated a temperature or fan alarm.
4	STAT: status indicator	Green	<ul style="list-style-type: none"><li>Off: The status mode is not selected.</li><li>Steady on: The service port indicators are in the status mode (default).</li></ul>
5	SPED: speed indicator	Green	<ul style="list-style-type: none"><li>Off: The speed mode is not selected.</li><li>Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.</li></ul>
6	STCK: stack indicator	-	Off <b>NOTE</b> The S5700-LI-BAT series switches do not support the stacking feature. This indicator is reserved for future use.
7	MODE: mode switch button	-	<ul style="list-style-type: none"><li>When you press this button once, the SPED indicator turns green, and the service port indicators show the speed of each service port.</li><li>When you press the button a second time, the STAT indicator turns green.</li></ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and STCK indicator are off.</p>

No.	Indicator/ Button	Color	Description
8	Service port indicator <ul style="list-style-type: none"> <li>• GE electrical ports: The ports are numbered from bottom to top and left to right, starting with 1.</li> <li>• GE optical ports: Each optical port has a corresponding indicator above it.</li> </ul>		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-169</a> .

**Table 4-169** Description of service port indicators in different modes

Mode	Color	Description
Status mode	Green	<ul style="list-style-type: none"> <li>• Off: The port is not connected or has been shut down.</li> <li>• Steady on: The port is connected.</li> <li>• Blinking: The port is sending or receiving data.</li> </ul>
Speed mode	Green	<ul style="list-style-type: none"> <li>• Off: The port is not connected or has been shut down.</li> <li>• Steady on: The port is operating at 10/100 Mbit/s.</li> <li>• Blinking: The port is operating at 1000 Mbit/s.</li> </ul>

## Power Supply Configuration

The S5700-28P-LI-BAT switch has a built-in AC power supply unit and can use a pluggable power module or battery for power redundancy. Power modules and batteries for the S5700-28P-LI-BAT switch are hot swappable.

### Battery module configuration

The battery installed on an S5700-28P-LI-BAT switch can automatically supply power to the switch in case of a mains power outage, ensuring uninterrupted services. When the AC power supply recovers, the battery turns to the charging state.

The S5700-28P-LI-BAT switch supports the following batteries and battery charger module:

- BAT-4AHA (chargeable lithium battery)
- BAT-8AHA (chargeable lithium battery)
- PBB-12AHA (12AH lead-acid battery charger module)

 **NOTE**

The PBB-12AHA module must connect to a lead-acid battery with 12AH of rated capacity.

The S5700-28P-LI-BAT switch can be configured with a battery to prevent service interruption caused by mains power outages. [Table 4-170](#) lists the power supply time of the batteries.

**Table 4-170** Battery configuration

Battery	Power Supply Time
BAT-4AHA	<ul style="list-style-type: none"><li>• The switch works with the maximum power consumption and the battery is fully charged: 2.4 hours</li><li>• The switch has 70% of ports in Up state, each port transmits 10% of maximum traffic and has the EEE function enabled, and the battery is fully charged: 4.1 hours</li><li>• The switch works with the minimum power consumption (no port is working) and the battery is fully charged: 5.6 hours</li></ul>
BAT-8AHA	<ul style="list-style-type: none"><li>• The switch works with the maximum power consumption and the battery is fully charged: 4.8 hours</li><li>• The switch has 70% of ports in Up state, each port transmits 10% of maximum traffic and has the EEE function enabled, and the battery is fully charged: 8.2 hours</li><li>• The switch works with the minimum power consumption (no port is working) and the battery is fully charged: 11.2 hours</li></ul>

**NOTE**

The power supply time shortens when a battery has been used for a long time.

**Battery module configuration**

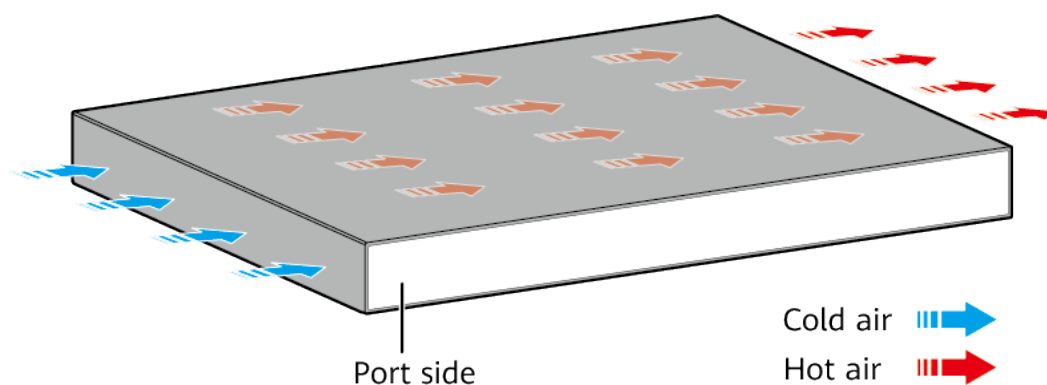
The S5700-28P-LI-BAT switch can be configured with a power module as a backup of the built-in power supply unit to improve power reliability.

The S5700-28P-LI-BAT switch supports the following power modules:

- 150 W AC power module
- 150 W DC power module

**Heat Dissipation**

The S5700-28P-LI-BAT has a built-in fan for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

**Technical Specifications**

**Table 4-171** lists technical specifications of the S5700-28P-LI-BAT.

**Table 4-171** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	57.9 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Built-in AC or using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	3.4 kg (7.5 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	23 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	22.7 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).



Item	Description
Storage temperature	<ul style="list-style-type: none"> <li>Pluggable modules not configured: -40°C to +70°C (-40°F to +158°F)</li> <li>Power modules configured: -40°C to +70°C (-40°F to +158°F)</li> <li>Lithium battery modules configured: -20°C to +60°C (-4°F to +140°F)</li> <li>Lead-acid battery modules configured: The storage temperature is determined according to the storage environment of lead-acid batteries.</li> </ul>
Noise under normal temperature (27°C, sound power)	< 43.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>DC power modules configured: 0-2000 m (0-6562 ft.)</li> <li>AC power modules or battery modules configured: 0-5000 m (0-16404 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	98010509

## 4.6.2 S5700-28P-LI-24S-BAT

### Version Mapping

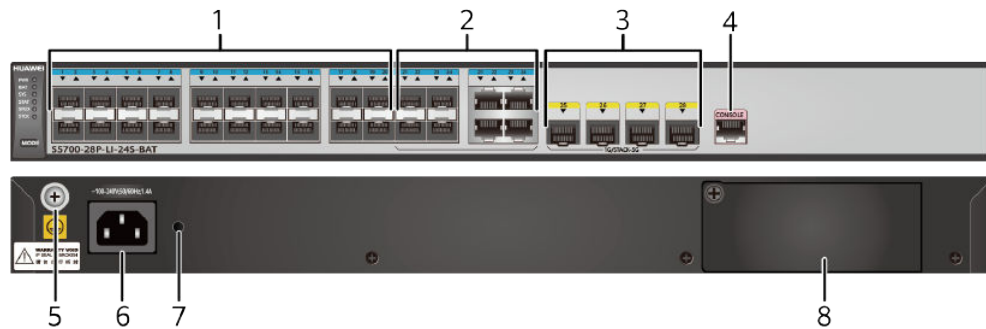
**Table 4-172** lists the mapping between the S5700-28P-LI-24S-BAT chassis and software versions.

**Table 4-172** Version mapping

Series	Model	Software Version
S5700-LI-BAT	S5700-28P-LI-24S-BAT	V200R003C02 to V200R012C00 versions  <b>NOTE</b> This model does not match V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

## Appearance and Structure

Figure 4-66 S5700-28P-LI-24S-BAT appearance



1	Twenty 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> </ul>
3	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>	4	One console port
5	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	6	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .

7	Jack for AC power cable locking strap  <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	8	Battery slot  <b>NOTE</b> Applicable battery modules or power modules: <ul style="list-style-type: none"> <li>• <a href="#">BAT-4AHA rechargeable lithium ion battery module</a></li> <li>• <a href="#">BAT-8AHA rechargeable lithium ion battery module</a></li> <li>• <a href="#">PBB-12AHA lead-acid battery charger module (requiring external lead-acid batteries)</a></li> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>
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## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-173](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-173** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

**1000BASE-X port**

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-174](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-174** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

**Console port**

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-175](#).

**Table 4-175** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

## Indicator Description

The S5700-28P-LI-24S-BAT has the same types of indicators as the S5700-28P-LI-BAT. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5700-28P-LI-24S-BAT switch has a built-in AC power supply unit and can use a pluggable power module or battery for power redundancy. Power modules and batteries for the S5700-28P-LI-24S-BAT switch are hot swappable.

### Battery module configuration

The battery installed on an S5700-28P-LI-24S-BAT switch can automatically supply power to the switch in case of a mains power outage, ensuring uninterrupted services. When the AC power supply recovers, the battery turns to the charging state.

The S5700-28P-LI-24S-BAT switch supports the following batteries and battery charger module:

- BAT-4AHA (chargeable lithium battery)
- BAT-8AHA (chargeable lithium battery)
- PBB-12AHA (12AH lead-acid battery charger module)

#### NOTE

The PBB-12AHA module must connect to a lead-acid battery with 12AH of rated capacity.

The S5700-28P-LI-24S-BAT switch can be configured with a battery to prevent service interruption caused by mains power outages. [Table 4-176](#) lists the power supply time of the batteries.

**Table 4-176** Battery configuration

Battery	Power Supply Time
BAT-4AHA	<ul style="list-style-type: none"> <li>• The switch works with the maximum power consumption and the battery is fully charged: 1.2 hours</li> <li>• The switch has 70% of ports in Up state, each port transmits 10% of maximum traffic, and the battery is fully charged: 2.1 hours</li> <li>• The switch works with the minimum power consumption (no port is working) and the battery is fully charged: 4.1 hours</li> </ul>
BAT-8AHA	<ul style="list-style-type: none"> <li>• The switch works with the maximum power consumption and the battery is fully charged: 2.3 hours</li> <li>• The switch has 70% of ports in Up state, each port transmits 10% of maximum traffic, and the battery is fully charged: 4.2 hours</li> <li>• The switch works with the minimum power consumption (no port is working) and the battery is fully charged: 8.3 hours</li> </ul>

 **NOTE**

The power supply time shortens when a battery has been used for a long time.

**Battery module configuration**

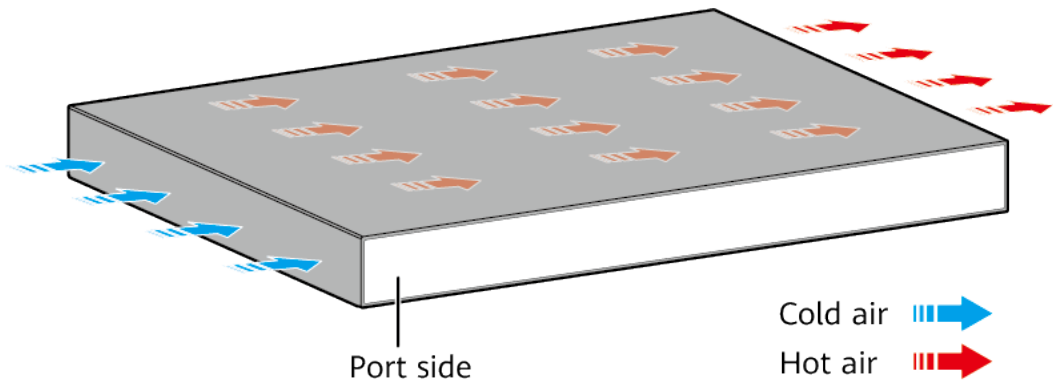
The S5700-28P-LI-24S-BAT switch can be configured with a power module as a backup of the built-in power supply unit to improve power reliability.

The S5700-28P-LI-24S-BAT switch supports the following power modules:

- 150 W AC power module
- 150 W DC power module

**Heat Dissipation**

The S5700-28P-LI-24S-BAT has two built-in fans for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-177** lists technical specifications of the S5700-28P-LI-24S-BAT.

**Table 4-177** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	45
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Built-in AC or using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	3.6 kg (7.94 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported

Item	Description
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	34.1 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	33.4 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	<ul style="list-style-type: none"> <li>• Pluggable modules not configured: -40°C to +70°C (-40°F to +158°F)</li> <li>• Power modules configured: -40°C to +70°C (-40°F to +158°F)</li> <li>• Lithium battery modules configured: -20°C to +60°C (-4°F to +140°F)</li> <li>• Lead-acid battery modules configured: The storage temperature is determined according to the storage environment of lead-acid batteries.</li> </ul>
Noise under normal temperature (27°C, sound power)	< 46.1 dB(A)
Relative humidity	5% to 95%, noncondensing



Item	Description
Operating altitude	<ul style="list-style-type: none"> <li>DC power modules configured: 0-2000 m (0-6562 ft.)</li> <li>AC power modules or battery modules configured: 0-5000 m (0-16404 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	98010511

## 4.7 S5710-LI

### 4.7.1 S5710-28C-LI

#### Version Mapping

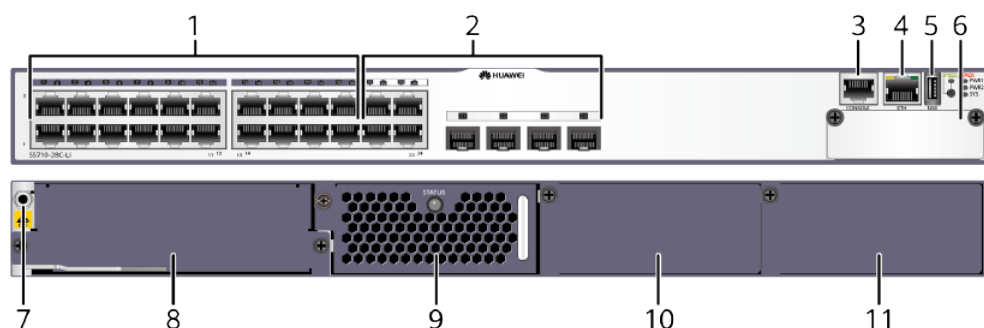
[Table 4-178](#) lists the mapping between the S5710-28C-LI chassis and software versions.

**Table 4-178** Version mapping

Series		Model	Software Version
S5710-LI	S5710-C-LI	S5710-28C-LI	V200R001C00 only

#### Appearance and Structure

**Figure 4-67** S5710-28C-LI appearance



1	Twenty 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	Front card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <b>8.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card)</b></li> <li>• <b>8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card)</b></li> <li>• <b>8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)</b></li> </ul>
7	ESD jack <b>NOTE</b> Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	8	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <b>8.30 ES5D00ETPC00 (Stack Rear Card)</b></li> <li>• <b>8.31 ES5D00ETPB00 (Extended Rear Card)</b></li> </ul>
9	Fan slot <b>NOTE</b> Applicable fan module: <b>CX7E1FANA fan module</b>	10	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <b>150 W AC power module</b></li> <li>• <b>150 W DC power module</b></li> </ul>
11	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <b>150 W AC power module</b></li> <li>• <b>150 W DC power module</b></li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-179](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-179** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-180](#).

**Table 4-180** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. **Table 4-181** describes the attributes of an ETH management port.

**Table 4-181** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

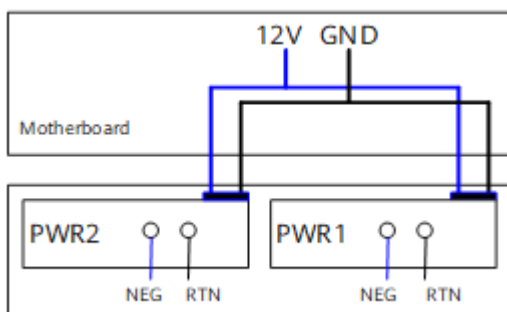
The S5710-28C-LI has the same types of indicators as the S5700-28C-SI. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5710-28C-LI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. The switch cannot use AC and DC power modules simultaneously.

**Figure 4-68** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-68** Power supply connections of dual DC power modules



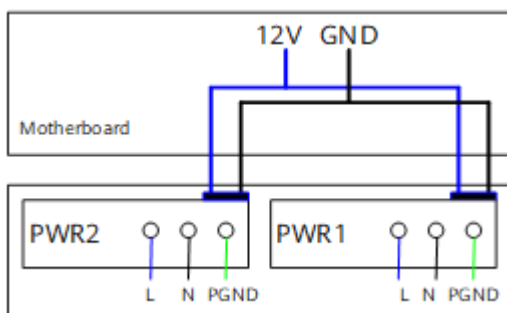
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

**Figure 4-69** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-69** Power supply connections of dual AC power modules



L: Live wire

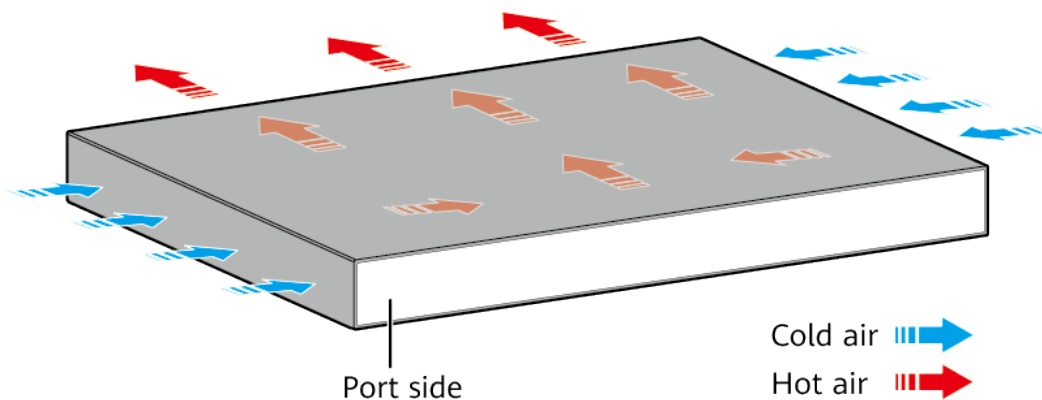
N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

## Heat Dissipation

The S5710-28C-LI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-182](#) lists technical specifications of the S5710-28C-LI.

**Table 4-182** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	53.7 years when a 2-port 10GE interface card is configured, 74.9 years when a 4-port GE front card is configured, 29.58 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 2$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)

Item	Description
Weight	<ul style="list-style-type: none"> <li>• Empty: ≤ 5 kg (11.02 lb)</li> <li>• Fully configured: ≤ 8.5 kg (18.74 lb)</li> </ul>
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	56 W
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 41 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02354139

## 4.7.2 S5710-28C-PWR-LI

### Version Mapping

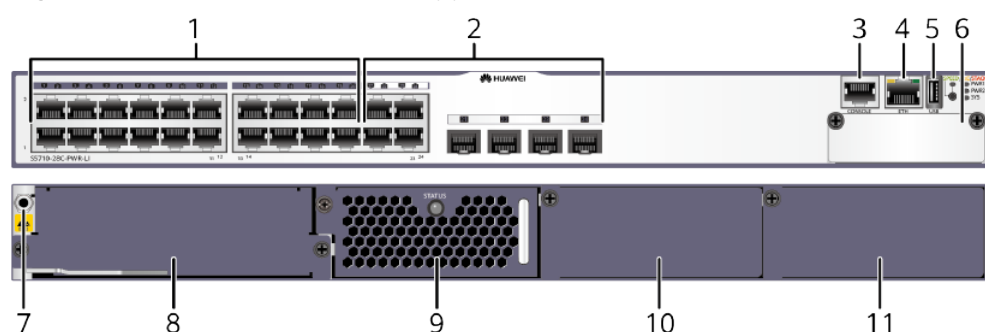
**Table 4-183** lists the mapping between the S5710-28C-PWR-LI chassis and software versions.

**Table 4-183** Version mapping

Series		Model	Software Version
S5710-LI	S5710-C-LI	S5710-28C-PWR-LI	V200R001C00 only

## Appearance and Structure

**Figure 4-70** S5710-28C-PWR-LI appearance



1	Twenty PoE+ 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	Front card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <b>8.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card)</b></li> <li>• <b>8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card)</b></li> <li>• <b>8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)</b></li> </ul>



7	ESD jack <b>NOTE</b> Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	8	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>8.30 ES5D00ETPC00 (Stack Rear Card)</li> <li>8.31 ES5D00ETPB00 (Extended Rear Card)</li> </ul>
9	Fan slot <b>NOTE</b> Applicable fan module: CX7E1FANA fan module	10	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>250 W AC PoE power module</li> <li>500 W AC PoE power module</li> </ul>
11	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>250 W AC PoE power module</li> <li>500 W AC PoE power module</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 4-184** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-184** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or

an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-185](#).

**Table 4-185** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the

*Configuration Guide - Basic Configurations.* [Table 4-186](#) describes the attributes of an ETH management port.

**Table 4-186** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5710-28C-PWR-LI has the same types of indicators as the S5700-28C-PWR-SI. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5710-28C-PWR-LI is a PoE switch. It has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). [Table 4-187](#) lists its power supply configurations.

**Table 4-187** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	-	123.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 8</li> <li>802.3at (30 W per port): 4</li> </ul>

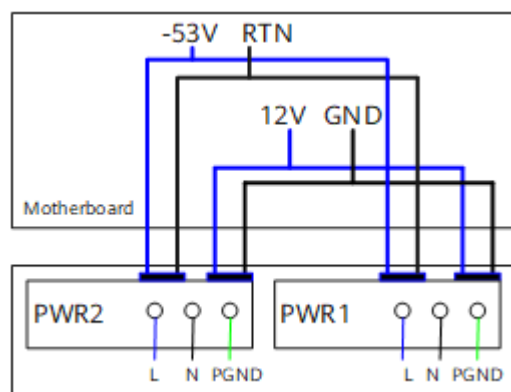
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W	–	369.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
250 W	250 W	246.4 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 16</li> <li>802.3at (30 W per port): 8</li> </ul>
500 W	500 W	739.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>

**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

**Figure 4-71** shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

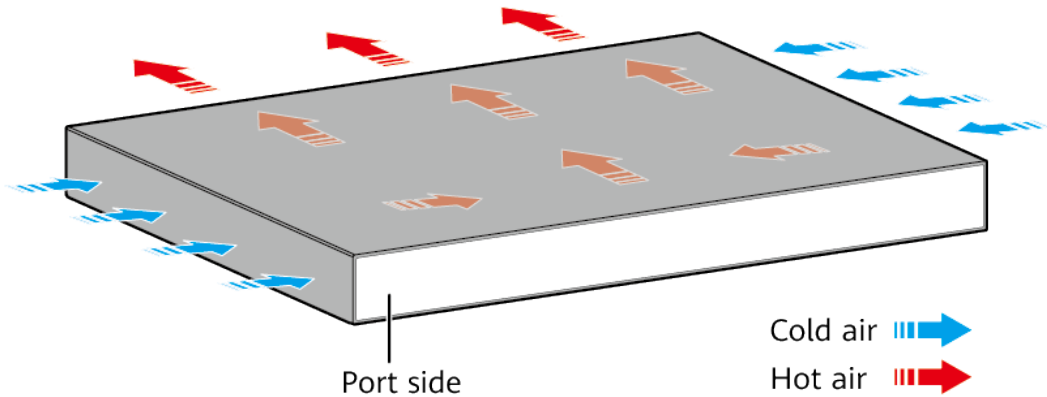
**Figure 4-71** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5710-28C-PWR-LI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-188** lists technical specifications of the S5710-28C-PWR-LI.

**Table 4-188** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	53.6 years when a 2-port 10GE interface card is configured, 74.6 years when a 4-port GE front card is configured, 25.68 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 1$ kV
Power supply surge protection	$\pm 2$ kV in differential mode, $\pm 4$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> <li>Empty: <math>\leq 5</math> kg (11.02 lb)</li> <li>Fully configured: <math>\leq 8.5</math> kg (18.74 lb)</li> </ul>
Stack ports	Two stack ports available on each stack card

Item	Description
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	836 W (system power consumption: 96 W, PoE: 740 W)
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>● EMC certification</li> <li>● Safety certification</li> <li>● Manufacturing certification</li> </ul>
Part number	02354136

### 4.7.3 S5710-52C-LI

#### Version Mapping

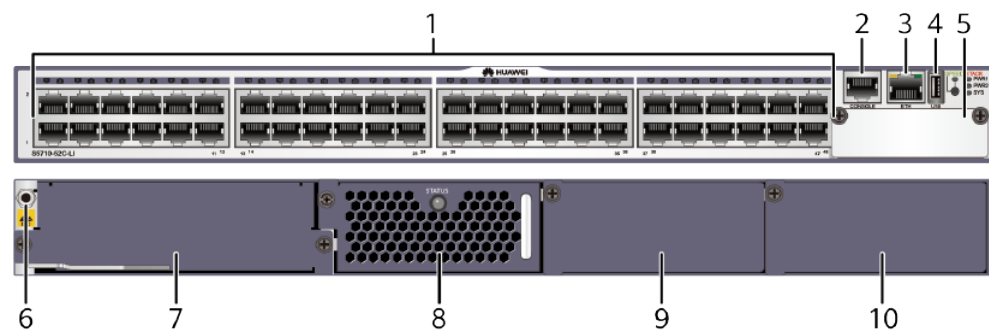
**Table 4-189** lists the mapping between the S5710-52C-LI chassis and software versions.

**Table 4-189** Version mapping

Series		Model	Software Version
S5710-LI	S5710-C-LI	S5710-52C-LI	V200R001C00 only

## Appearance and Structure

**Figure 4-72** S5710-52C-LI appearance



1	Forty-eight 10/100/1000BASE-T ports	2	One console port
3	One ETH management port	4	One USB port
5	Front card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>8.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card)</li> <li>8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card)</li> <li>8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)</li> </ul>	6	ESD jack <b>NOTE</b> Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.
7	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>8.30 ES5D00ETPC00 (Stack Rear Card)</li> <li>8.31 ES5D00ETPB00 (Extended Rear Card)</li> </ul>	8	Fan slot <b>NOTE</b> Applicable fan module: <b>CX7E1FANA fan module</b>

9	Power module slot 2  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	10	Power module slot 1  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-190](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-190** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-191](#).

**Table 4-191** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s



### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 4-192](#) describes the attributes of an ETH management port.

**Table 4-192** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

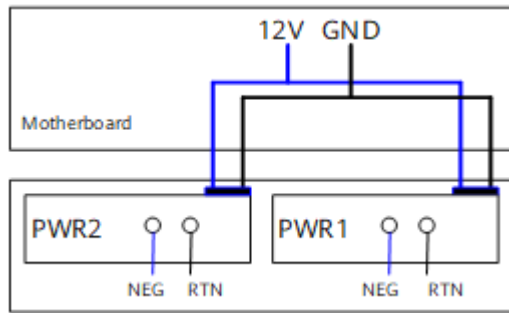
The S5710-52C-LI has the same types of indicators as the S5700-28C-SI. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5710-52C-LI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. The switch cannot use AC and DC power modules simultaneously.

[Figure 4-73](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-73** Power supply connections of dual DC power modules



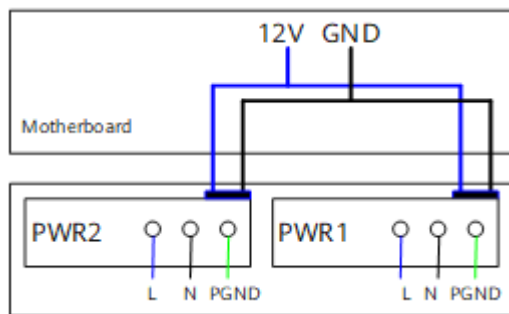
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

**Figure 4-74** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-74** Power supply connections of dual AC power modules



L: Live wire

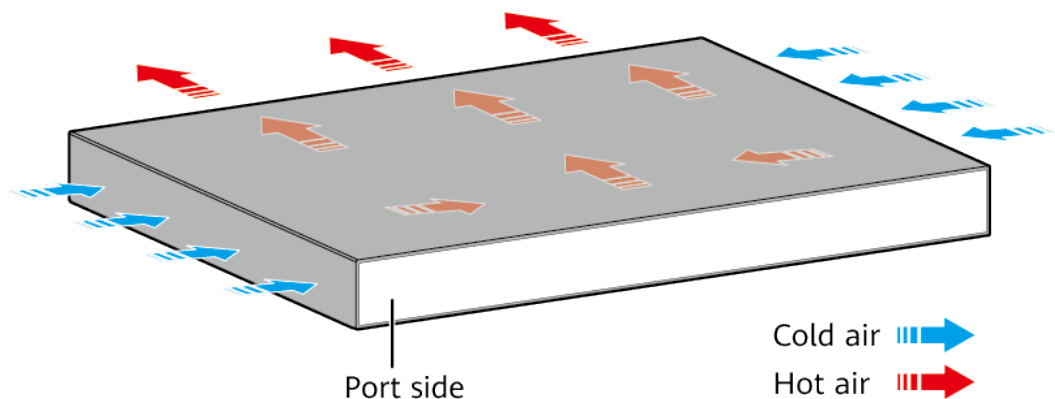
N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

## Heat Dissipation

The S5710-52C-LI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-193** lists technical specifications of the S5710-52C-LI.

**Table 4-193** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	51.3 years when a 2-port 10GE interface card is configured, 70.3 years when a 4-port GE front card is configured, 28.58 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 2$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> <li>Empty: <math>\leq 5</math> kg (11.02 lb)</li> <li>Fully configured: <math>\leq 8.5</math> kg (18.74 lb)</li> </ul>
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	78 W

Item	Description
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 41 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	02354138

## 4.7.4 S5710-52C-PWR-LI

### Version Mapping

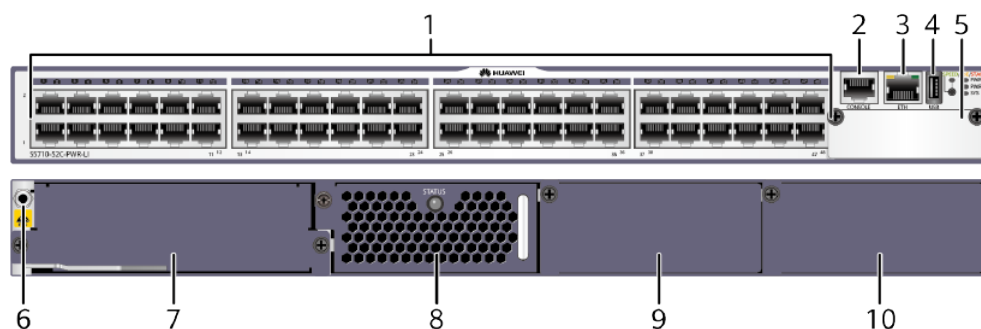
**Table 4-194** lists the mapping between the S5710-52C-PWR-LI chassis and software versions.

**Table 4-194** Version mapping

Series		Model	Software Version
S5710-LI	S5710-C-LI	S5710-52C-PWR-LI	V200R001C00 only

### Appearance and Structure

**Figure 4-75** S5710-52C-PWR-LI appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	One console port
3	One ETH management port	4	One USB port
5	Front card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>8.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card)</li> <li>8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card)</li> <li>8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)</li> </ul>	6	ESD jack <b>NOTE</b> Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.
7	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>8.30 ES5D00ETPC00 (Stack Rear Card)</li> <li>8.31 ES5D00ETPB00 (Extended Rear Card)</li> </ul>	8	Fan slot <b>NOTE</b> Applicable fan module: CX7E1FANA fan module
9	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>250 W AC PoE power module</li> <li>500 W AC PoE power module</li> </ul>	10	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>250 W AC PoE power module</li> <li>500 W AC PoE power module</li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-195](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-195** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-196](#).

**Table 4-196** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 4-197](#) describes the attributes of an ETH management port.

**Table 4-197** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5710-52C-PWR-LI has the same types of indicators as the S5700-28C-PWR-SI. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5710-52C-PWR-LI is a PoE switch. It has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). [Table 4-198](#) lists its power supply configurations.

**Table 4-198** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	–	123.2 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 8</li><li>802.3at (30 W per port): 4</li></ul>
500 W	–	369.6 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 24</li><li>802.3at (30 W per port): 12</li></ul>
250 W	250 W	246.4 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 16</li><li>802.3at (30 W per port): 8</li></ul>

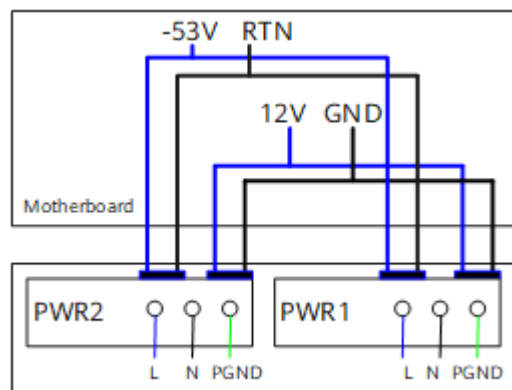
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W	500 W	739.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 24</li> </ul>

**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

**Figure 4-76** shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

**Figure 4-76** Power supply by dual AC PoE power modules

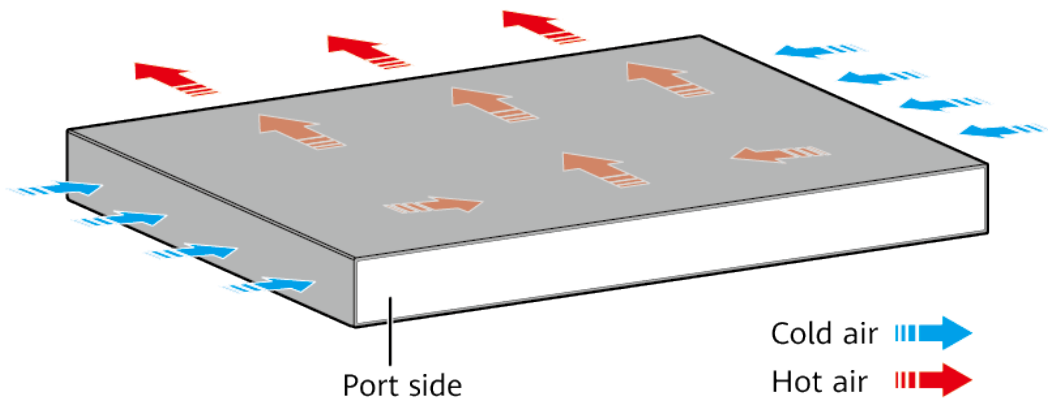


L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5710-52C-PWR-LI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.





**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-199** lists technical specifications of the S5710-52C-PWR-LI.

**Table 4-199** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	50.4 years when a 2-port 10GE interface card is configured, 68.6 years when a 4-port GE front card is configured, 35.58 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 1$ kV
Power supply surge protection	$\pm 2$ kV in differential mode, $\pm 4$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> <li>Empty: <math>\leq 5</math> kg (11.02 lb)</li> <li>Fully configured: <math>\leq 8.5</math> kg (18.74 lb)</li> </ul>
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Supported

Item	Description
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	917 W (system power consumption: 177 W, PoE: 740 W)
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02354134

## 4.7.5 S5710-28X-LI-AC

### Version Mapping

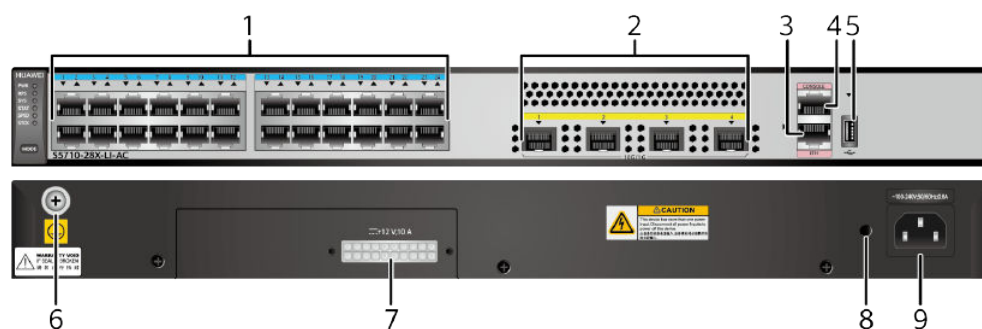
**Table 4-200** lists the mapping between the S5710-28X-LI-AC chassis and software versions.

**Table 4-200** Version mapping

Series		Model	Software Version
S5710-LI	S5710-X-LI	S5710-28X-LI-AC	V200R008C00 to V200R012C00 versions

## Appearance and Structure

**Figure 4-77** S5710-28X-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (a maximum transmission distance of 10 km, OSXD22N00 not supported)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>GPON optical module (applicable in V200R012C00 version)</b></li> </ul> <p><b>NOTE</b> If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	One console port
5	One USB port	6	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>
7	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <b>RPS cable</b>, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>

9	AC socket	-	-
	<b>NOTE</b> It is used with an <a href="#">AC power cable</a> .		

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-201](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-201** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-202](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-202** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 4-203](#).

**Table 4-203** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-204](#) describes the attributes of an ETH management port.

**Table 4-204** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

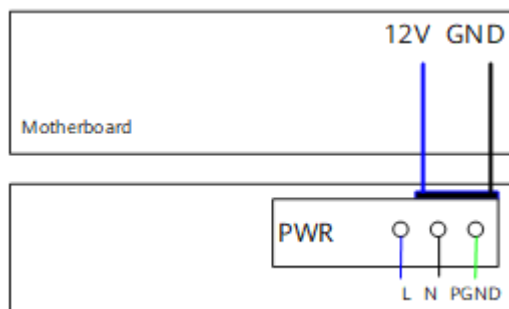
The S5710-28X-LI-AC has the same types of indicators as the S5700S-52X-LI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5710-28X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

**Figure 4-78** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-78** Power supply mode of a built-in AC power module



L: live wire

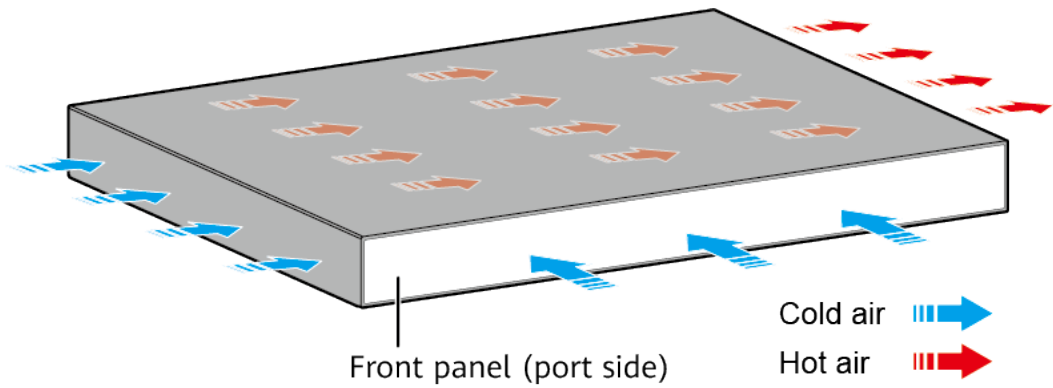
N: neutral wire

PGND: protection  
ground wire

GND: 12 V reference  
ground

## Heat Dissipation

The S5710-28X-LI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-205** lists technical specifications of the S5710-28X-LI-AC.

**Table 4-205** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	100.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.8 kg (10.58 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported



Item	Description
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	32 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	22 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350GEM

## 4.7.6 S5710-52X-LI-AC

### Version Mapping

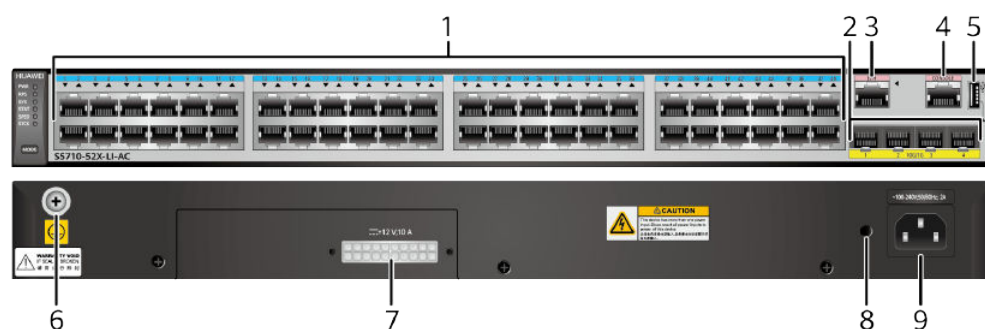
**Table 4-206** lists the mapping between the S5710-52X-LI-AC chassis and software versions.

**Table 4-206** Version mapping

Series		Model	Software Version
S5710-LI	S5710-X-LI	S5710-52X-LI-AC	V200R008C00 to V200R012C00 versions

### Appearance and Structure

**Figure 4-79** S5710-52X-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>GPON optical module (applicable in V200R012C00 version)</b></li> </ul> <p><b>NOTE</b> If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	One console port
5	One USB port	6	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>
7	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <b>RPS cable</b>, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>

9	AC socket  <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-207](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-207** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-208](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-208** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 4-209](#).

**Table 4-209** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-210](#) describes the attributes of an ETH management port.

**Table 4-210** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

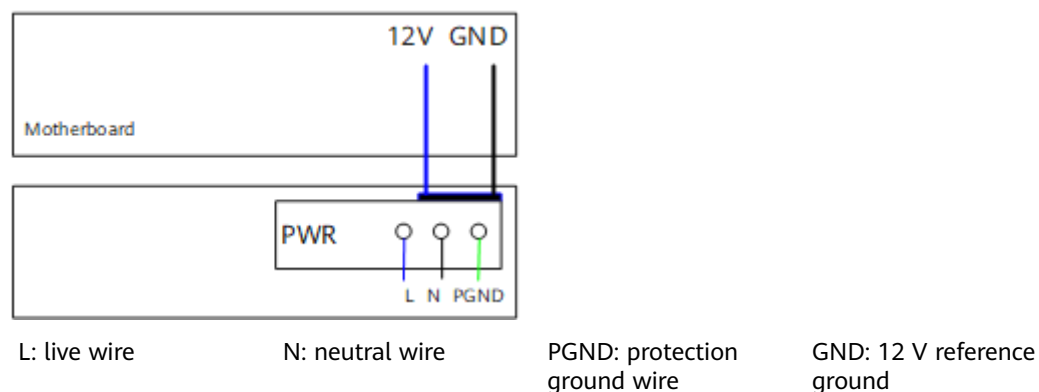
The S5710-52X-LI-AC has the same types of indicators as the S5700S-52X-LI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5710-52X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

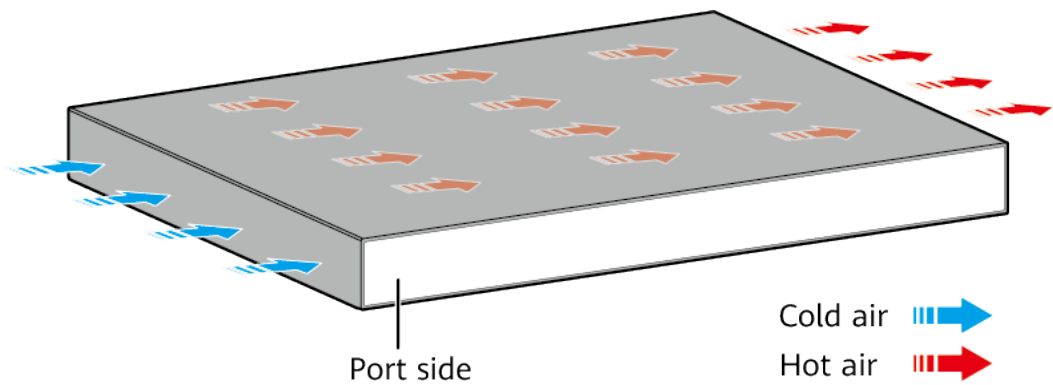
**Figure 4-80** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-80** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5710-52X-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-211** lists technical specifications of the S5710-52X-LI-AC.

**Table 4-211** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	86.64 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	5 kg (11.02 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported

Item	Description
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	54.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	34.4 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350GEN



## 4.8 S5720-LI

### 4.8.1 S5720-12TP-LI-AC

#### Version Mapping

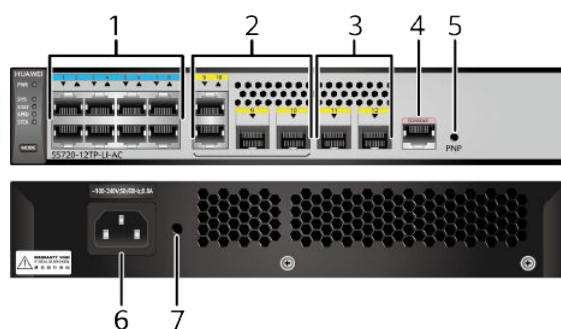
**Table 4-212** lists the mapping between the S5720-12TP-LI-AC chassis and software versions.

**Table 4-212** Version mapping

Series	Model	Software Version
S5720-LI	S5720-12TP-LI-AC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

#### Appearance and Structure

**Figure 4-81** S5720-12TP-LI-AC appearance



1	Eight 10/100/1000BASE-T ports	2	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b> (the maximum transmission distance cannot exceed 40 km)</li> </ul>
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3	<p>Two 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b> (the maximum transmission distance cannot exceed 40 km)</li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only applicable to stack ports)</b></li> <li>• <b>1 m, 3 m, 5 m, 10 m SFP+ high-speed copper cables (only applicable to stack ports)</b></li> <li>• <b>3 m and 10 m AOC cables (only applicable to stack ports)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b>                  If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>	4	<p>One console port</p>
5	<p>One PNP button</p> <p><b>NOTICE</b>                  Applicable in V200R012C00 and later versions:                  To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.                  To reset the switch, press the button.                  Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>AC socket</p> <p><b>NOTE</b>                  It is used with an <b>AC power cable</b>.</p>
7	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b>                  The AC power cable locking strap is not delivered with the switch.</p>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-213](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-213** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission

speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-214](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-214** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-215](#).

**Table 4-215** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

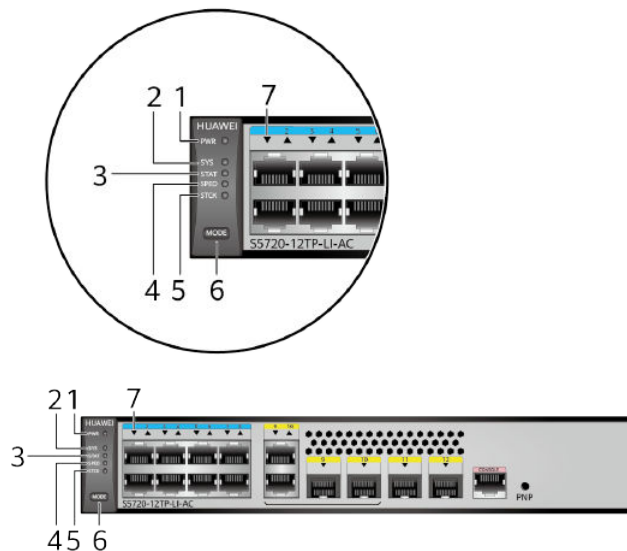
## Indicator Description

### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-82** Indicators on the S5720-12TP-LI-AC



**Table 4-216** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
			Yellow or red	Steady on	The built-in power module has failed.

No.	Indicator	Name	Color	Status	Description
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a temperature alarm has been generated.
3	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
5	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

No.	Indicator	Name	Color	Status	Description
6	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
7	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-217</a> .		

**Table 4-217** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Description
Status	Green	<ul style="list-style-type: none"> <li>Off: The port is not connected or has been shut down.</li> <li>Steady on: The port is connected.</li> <li>Blinking: The port is sending or receiving data.</li> </ul>
Speed	Green	<ul style="list-style-type: none"> <li>Off: The port is not connected or has been shut down.</li> <li>Steady on: 10M/100M/1000M port: The port is operating at 10/100 Mbit/s.</li> <li>Blinking: 10M/100M/1000M port: The port is operating at 1000 Mbit/s.</li> </ul>

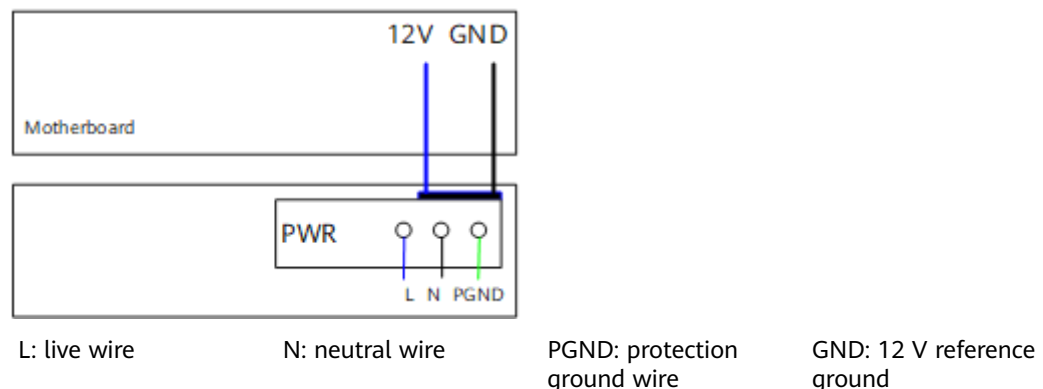
Display Mode	Color	Description
Stack	Green	<p>Off: Port indicators do not show the stack ID of the switch.</p> <p>If the indicator is steady on, the switch is not a master switch:</p> <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul> <p>If the indicator is blinking, the switch is a master switch:</p> <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5720-12TP-LI-AC has a built-in power module and does not support pluggable power modules.

**Figure 4-83** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-83** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720-12TP-LI-AC has no fans and uses natural heat dissipation.



## Technical Specifications

**Table 4-218** lists technical specifications of the S5720-12TP-LI-AC.

**Table 4-218** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	23.8 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.8 in. x 7.1 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 250.0 mm x 186.7 mm (1.72 in. x 9.8 in. x 7.35 in.)</li> </ul>
Weight (with packaging)	1.8 kg (3.97 lb)
Stack ports	Eight 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	12.85 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"><li>• Tested according to ATIS standard</li><li>• EEE enabled</li><li>• No PoE power consumption</li></ul>	10.39 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses GE SFP optical modules with 40 km transmission distance.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	98010567

## 4.8.2 S5720-12TP-PWR-LI-AC

### Version Mapping

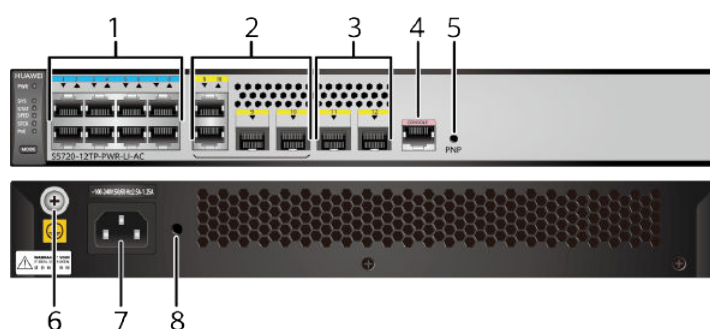
**Table 4-219** lists the mapping between the S5720-12TP-PWR-LI-AC chassis and software versions.

**Table 4-219** Version mapping

Series	Model	Software Version
S5720-LI	S5720-12TP-PWR-LI-AC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-84** S5720-12TP-PWR-LI-AC appearance



1	Eight PoE+ 10/100/1000BASE-T ports	2	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b> (the maximum transmission distance cannot exceed 40 km)</li> </ul>
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3	<p>Two 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b> (the maximum transmission distance cannot exceed 40 km)</li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only applicable to stack ports)</b></li> <li>• <b>1 m, 3 m, 5 m, 10 m SFP+ high-speed copper cables (only applicable to stack ports)</b></li> <li>• <b>3 m and 10 m AOC cables (only applicable to stack ports)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b> If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>	4	One console port
5	<p>One PNP button</p> <p><b>NOTICE</b> Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>
7	<p>AC socket</p> <p><b>NOTE</b> It is used with an <b>AC power cable</b>.</p>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-220](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-220** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission

speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-221](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-221** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-222](#).

**Table 4-222** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

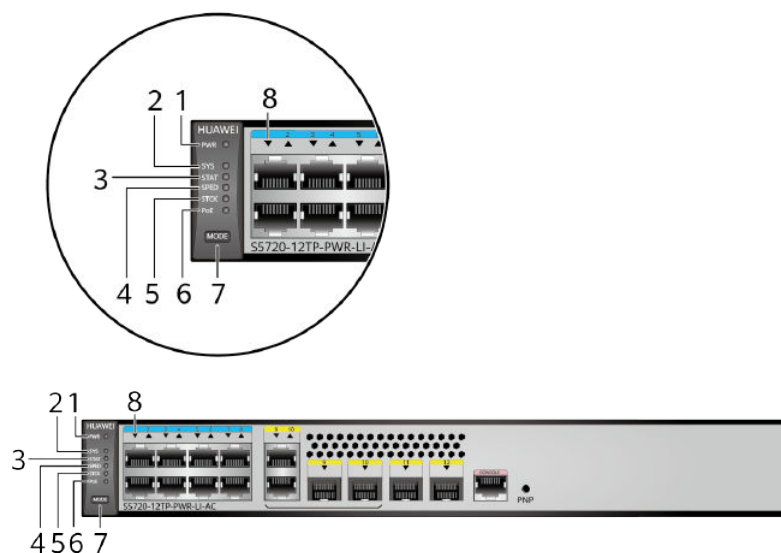
## Indicator Description

### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-85** Indicators on the S5720-12TP-PWR-LI-AC



**Table 4-223** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
			Yellow or red	Steady on	The built-in power module has failed.

No.	Indicator	Name	Color	Status	Description
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a temperature alarm has been generated.
3	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
5	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>



No.	Indicator	Name	Color	Status	Description
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-224</a> .		

**Table 4-224** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.

Display Mode	Color	Status	Description
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> <li>• The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.</li> <li>• The total power consumption of PDs has reached the maximum power of the switch.</li> <li>• The manual power management mode is used and the port is not enabled to provide power to the PD.</li> </ul>
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>

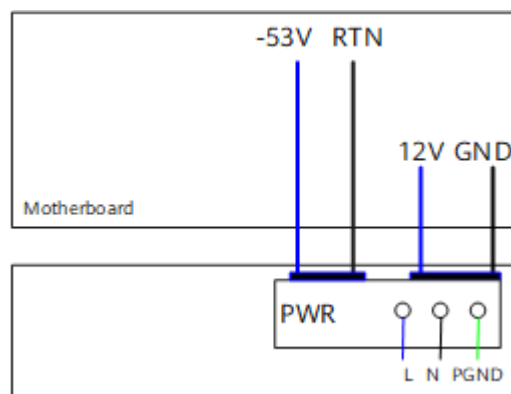
Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5720-12TP-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

**Figure 4-86** shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

**Figure 4-86** Power supply by a built-in AC PoE power module



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5720-12TP-PWR-LI-AC has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-225** lists technical specifications of the S5720-12TP-PWR-LI-AC.

**Table 4-225** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	23.8 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 320.0 mm x 220.0 mm (1.72 in. x 12.6 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 320.0 mm x 228.3 mm (1.72 in. x 12.6 in. x 8.99 in.)</li> </ul>
Weight (with packaging)	3 kg (6.62 lb)
Stack ports	Eight 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 15.61 W</li> <li>100% PoE loads: 160.5 W (system power consumption: 37.3 W, PoE: 123.2 W)</li> </ul>

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	14.57 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses GE SFP optical modules with 40 km transmission distance.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010570

## 4.8.3 S5720-28TP-LI-AC

### Version Mapping

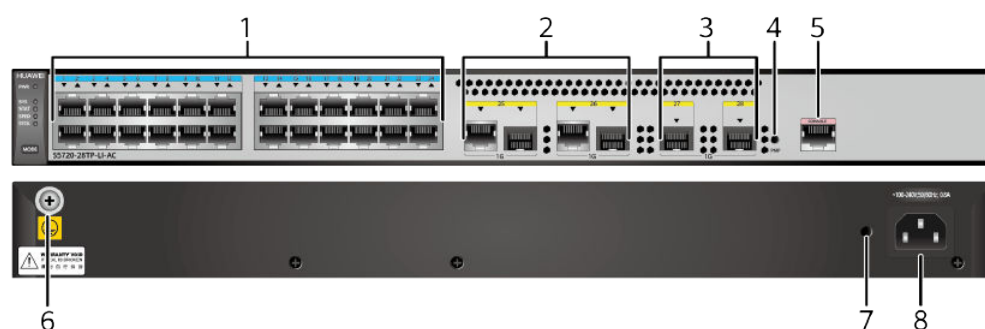
**Table 4-226** lists the mapping between the S5720-28TP-LI-AC chassis and software versions.

**Table 4-226** Version mapping

Series	Model	Software Version
S5720-LI	S5720-28TP-LI-AC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-87** S5720-28TP-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>● <b>FE optical module</b></li> <li>● <b>GE optical module</b> (maximum transmission distance ≤ 40 km)</li> </ul>
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3	<p>Two 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b> (maximum transmission distance ≤ 40 km)</li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only used for stack connection)</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m AOC cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b> If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>	4	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	<p>One console port</p>	6	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>
7	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>	8	<p>AC socket</p> <p><b>NOTE</b> It is used with an <b>AC power cable</b>.</p>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 4-227](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-227** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-228](#) describes the attributes of a 1000BASE-X Ethernet optical port.



**Table 4-228** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-229](#).

**Table 4-229** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Indicator Description

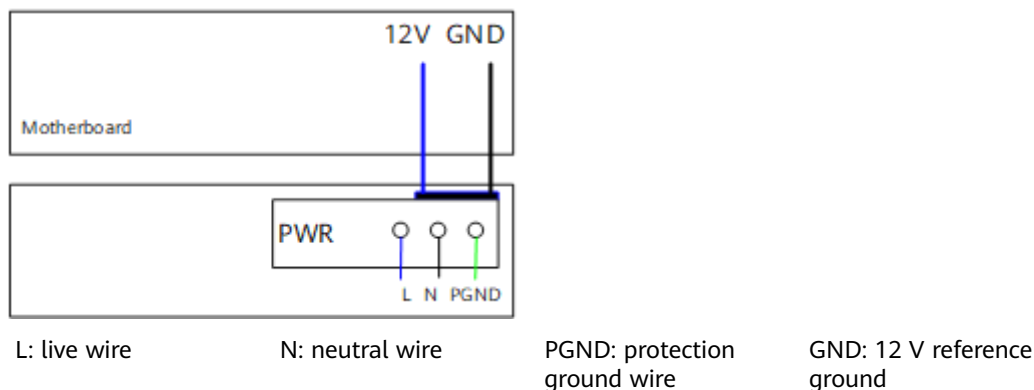
The S5720-28TP-LI-AC has similar indicators to those of the S5720-28TP-PWR-LI-AC except that the S5720-28TP-LI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

### Power Supply Configuration

The S5720-28TP-LI-AC has a built-in power module and does not support pluggable power modules.

[Figure 4-88](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-88** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720-28TP-LI-AC has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-230** lists technical specifications of the S5720-28TP-LI-AC.

**Table 4-230** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	43 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)</li> </ul>
Weight (with packaging)	4 kg (8.82 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	22.1 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	16.2 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses GE SFP optical modules with 40 km transmission distance.

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010639

## 4.8.4 S5720-28TP-PWR-LI-AC

### Version Mapping

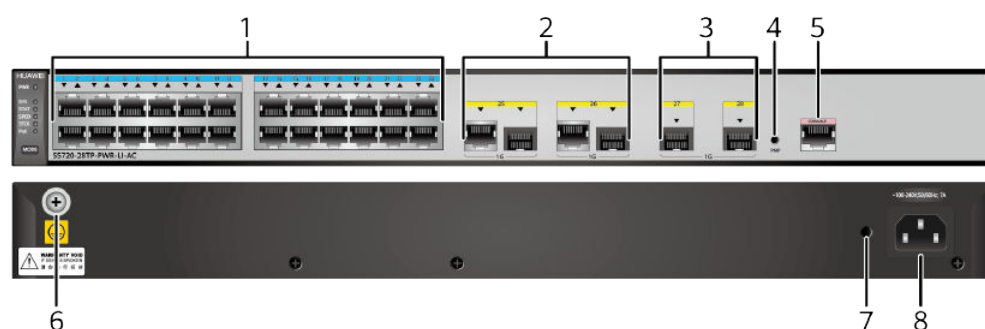
[Table 4-231](#) lists the mapping between the S5720-28TP-PWR-LI-AC chassis and software versions.

**Table 4-231** Version mapping

Series	Model	Software Version
S5720-LI	S5720-28TP-PWR-LI-AC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-89** S5720-28TP-PWR-LI-AC appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>● FE optical module</li> <li>● GE optical module</li> <li>● GE-CWDM optical module</li> <li>● GE-DWDM optical module</li> </ul>
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3	<p>Two 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only used for stack connection)</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m AOC cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b> If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>	4	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	<p>One console port</p>	6	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>
7	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>	8	<p>AC socket</p> <p><b>NOTE</b> It is used with an <b>AC power cable</b>.</p>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 4-232](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-232** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-233](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-233** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-234](#).

**Table 4-234** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

## Indicator Description

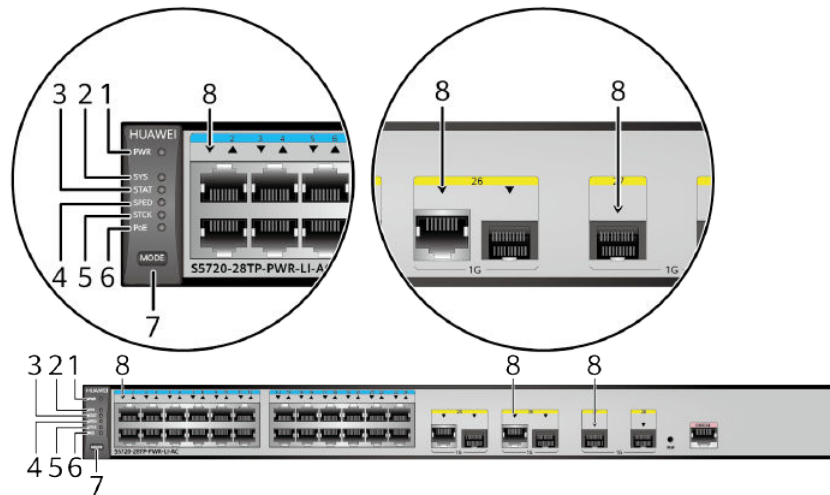
### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.



**Figure 4-90** Indicators on the S5720-28TP-PWR-LI-AC



**NOTE**

The S5720-LI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators of a switch. If the switch fails, its SYS indicator and mode indicators can be configured to blink red fast so that field maintenance personnel can find this faulty switch.

**Table 4-235** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
			Yellow or red	Steady on	The built-in power module has failed.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.

No.	Indicator	Name	Color	Status	Description
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
3	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
5	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-236</a> .		

**Table 4-236** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> <li>• The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.</li> <li>• The total power consumption of PDs has reached the maximum power of the switch.</li> <li>• The manual power management mode is used and the port is not enabled to provide power to the PD.</li> </ul>
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>

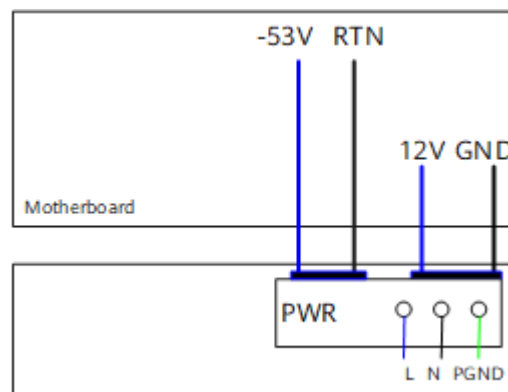
Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5720-28TP-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

**Figure 4-91** shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

**Figure 4-91** Power supply by a built-in AC PoE power module



L: live wire

N: neutral wire

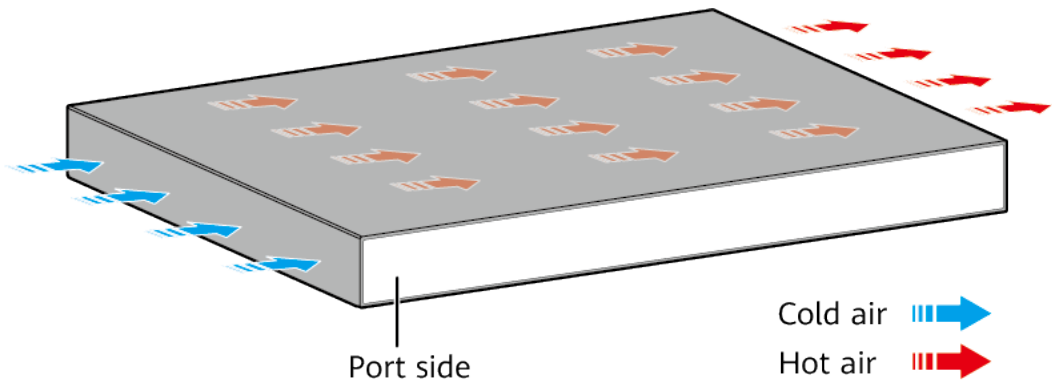
PGND: protection  
ground wire

GND: 12 V  
reference ground

RTN: -53 V  
reference ground

## Heat Dissipation

The S5720-28TP-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-237** lists technical specifications of the S5720-28TP-PWR-LI-AC.

**Table 4-237** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	40 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)</li> </ul>
Weight (with packaging)	5.3 kg (11.69 lb)

Item	Description
Stack ports	Twenty-four 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>• Not providing the PoE function: 38.8 W</li> <li>• 100% PoE loads: 444.8 W (system power consumption: 75.2 W, PoE: 369.6 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	27.4 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b>                      When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 48.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010637

## 4.8.5 S5720-28TP-PWR-LI-ACL

### Version Mapping

[Table 4-238](#) lists the mapping between the S5720-28TP-PWR-LI-ACL chassis and software versions.

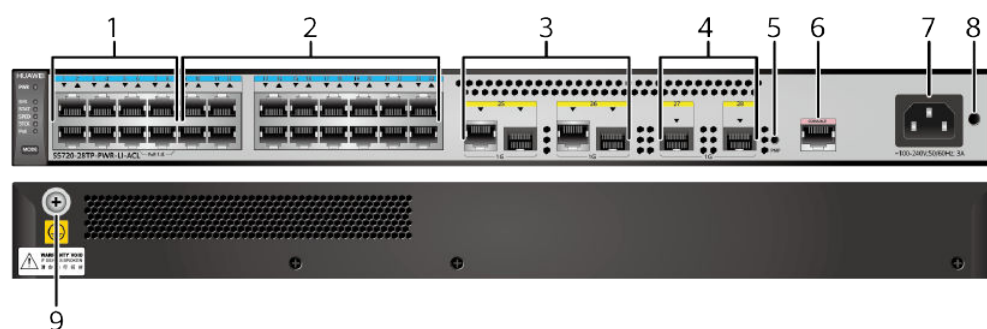


**Table 4-238** Version mapping

Series	Model	Software Version
S5720-LI	S5720-28TP-PWR-LI-ACL	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-92** S5720-28TP-PWR-LI-ACL appearance



1	Eight PoE+ 10/100/1000BASE-T ports	2	Sixteen 10/100/1000BASE-T ports
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3	<p>Two combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b> (the maximum transmission distance cannot exceed 40 km)</li> </ul>	4	<p>Two 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b> (the maximum transmission distance cannot exceed 40 km)</li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only applicable to stack ports)</b></li> <li>• <b>1 m, 3 m, 5 m, 10 m SFP+ high-speed copper cables (only applicable to stack ports)</b></li> <li>• <b>3 m and 10 m AOC cables (only applicable to stack ports)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b> If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
5	<p>One PNP button</p> <p><b>NOTICE</b> Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>One console port</p>
7	<p>AC socket</p> <p><b>NOTE</b> It is used with an <b>AC power cable</b>.</p>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>

9	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	-	-
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-239](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-239** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

**1000BASE-X port**

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-240](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-240** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

**Console port**

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-241](#).

**Table 4-241** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

## Indicator Description

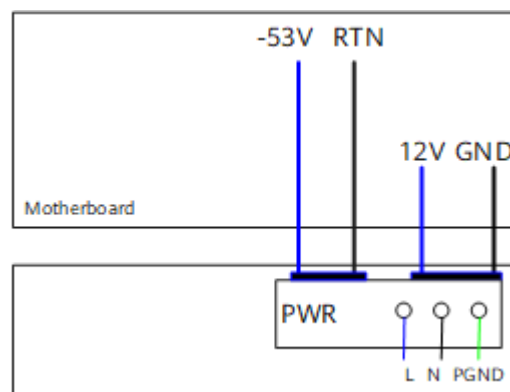
The S5720-28TP-PWR-LI-ACL has the same types of indicators as the S5720-28TP-PWR-LI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-28TP-PWR-LI-ACL has a built-in power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

**Figure 4-93** shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

**Figure 4-93** Power supply by a built-in AC PoE power module



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5720-28TP-PWR-LI-ACL has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-242** lists technical specifications of the S5720-28TP-PWR-LI-ACL.

**Table 4-242** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	42 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)</li> </ul>
Weight (with packaging)	4.5 kg (9.92 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
Maximum power consumption (100% throughput)	<ul style="list-style-type: none"><li>• Not providing the PoE function: 24.4 W</li><li>• 100% PoE loads: 165.6 W (system power consumption: 42.4 W, PoE: 123.2 W)</li></ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"><li>• Tested according to ATIS standard</li><li>• EEE enabled</li><li>• No PoE power consumption</li></ul>	19.4 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses GE SFP optical modules with 40 km transmission distance.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	98010634

## 4.8.6 S5720-28P-LI-AC

## Version Mapping

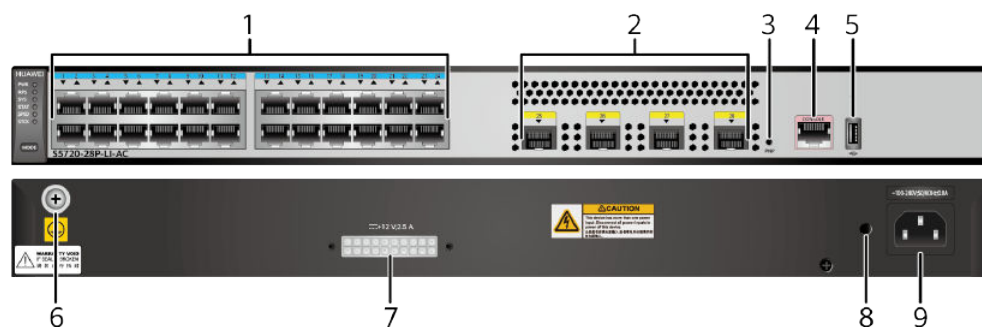
**Table 4-243** lists the mapping between the S5720-28P-LI-AC chassis and software versions.

**Table 4-243** Version mapping

Series	Model	Software Version
S5720-LI	S5720-28P-LI-AC	V200R011C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-94** S5720-28P-LI-AC appearance





1	Twenty-four 10/100/1000BASE-T ports	<p>2</p> <p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only used for stack connection)</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m AOC cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p>A license can be activated on the switch to increase the speed of the four optical ports to 10 Gbit/s.</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (maximum transmission distance of 10 km, OSXD22N00 not supported)</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables</b></li> </ul>
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			<p>(used for zero-configuration stacking, supported in V200R011C10 and later versions)</p> <ul style="list-style-type: none"> <li>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</li> </ul> <p><b>NOTE</b> If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p><b>NOTICE</b> Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	One console port
5	One USB port	6	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>
7	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <a href="#">RPS cable</a>, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p><b>NOTE</b> It is used with an <a href="#">AC power cable</a>.</p>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-244](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-244** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-245](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-245** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-246](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-246** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-247](#).

**Table 4-247** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

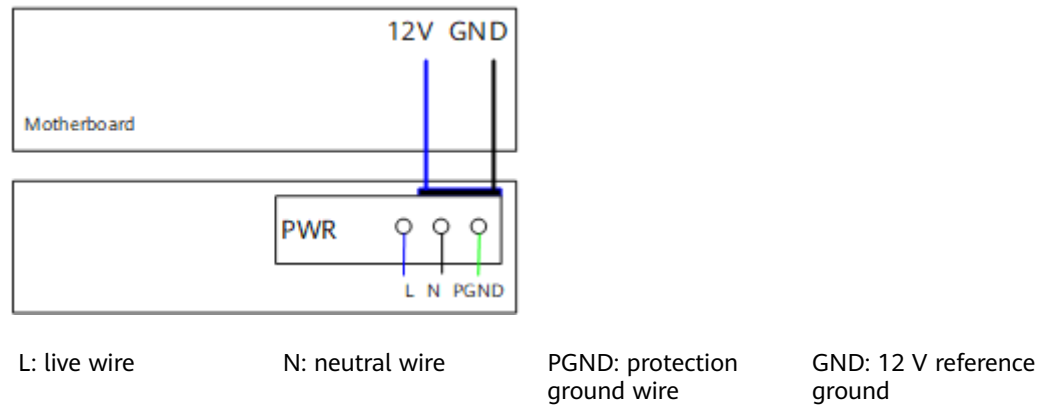
The S5720-28P-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720-28P-LI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-28P-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

**Figure 4-95** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-95** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720-28P-LI-AC has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-248** lists technical specifications of the S5720-28P-LI-AC.

**Table 4-248** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	45 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)</li> </ul>
Weight (with packaging)	3.9 kg (8.6 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	27.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	19.6 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses GE SFP optical modules with 40 km or longer transmission distances.

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010768

## 4.8.7 S5720-28P-PWR-LI-AC

### Version Mapping

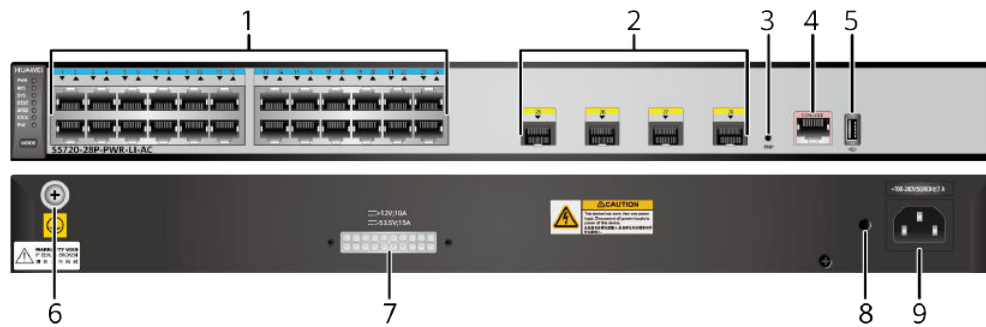
[Table 4-249](#) lists the mapping between the S5720-28P-PWR-LI-AC chassis and software versions.

**Table 4-249** Version mapping

Series	Model	Software Version
S5720-LI	S5720-28P-PWR-LI-AC	V200R011C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-96** S5720-28P-PWR-LI-AC appearance





1	Twenty-four PoE + 10/100/1000BASE-T ports	<p>2 Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only used for stack connection)</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m AOC cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p>A license can be activated on the switch to increase the speed of the four optical ports to 10 Gbit/s.</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables</b></li> </ul>
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			<p>(used for zero-configuration stacking, supported in V200R011C10 and later versions)</p> <ul style="list-style-type: none"> <li>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</li> </ul> <p><b>NOTE</b> If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p><b>NOTICE</b> Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	One console port
5	One USB port	6	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>
7	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <a href="#">RPS cable</a>, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p><b>NOTE</b> It is used with an <a href="#">AC power cable</a>.</p>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-250](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-250** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-251](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-251** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-252](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-252** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-253](#).

**Table 4-253** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

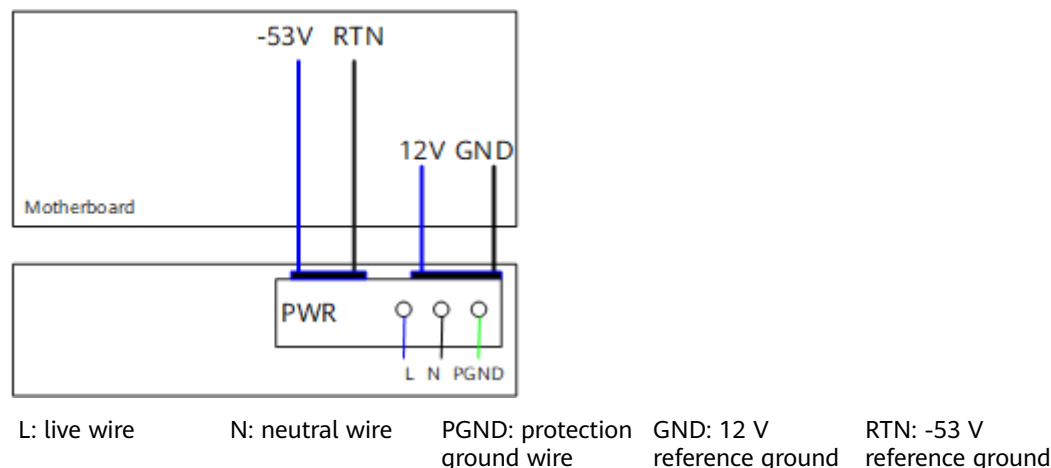
The S5720-28P-PWR-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-28P-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch can connect to an RPS1800 power supply. The RPS1800 only provides system power redundancy and does not increase the PoE capacity of the switch.

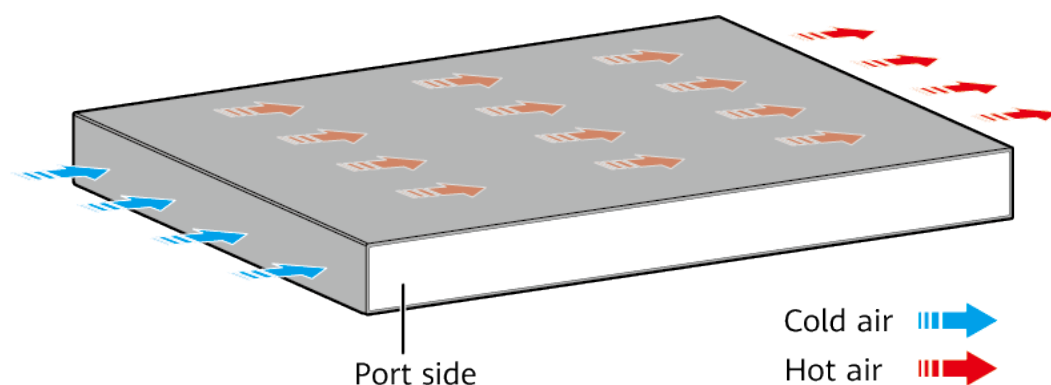
**Figure 4-97** shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

**Figure 4-97** Power supply by a built-in AC PoE power module



## Heat Dissipation

The S5720-28P-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-254** lists technical specifications of the S5720-28P-PWR-LI-AC.

**Table 4-254** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)</li> </ul>
Weight (with packaging)	5.2 kg (11.45 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 42.7 W</li> <li>100% PoE loads: 448.5 W (system power consumption: 78.9 W, PoE: 369.6 W)</li> </ul>

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	29.5 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b>                      When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b>                      When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010769

## 4.8.8 S5720-52P-LI-AC

### Version Mapping

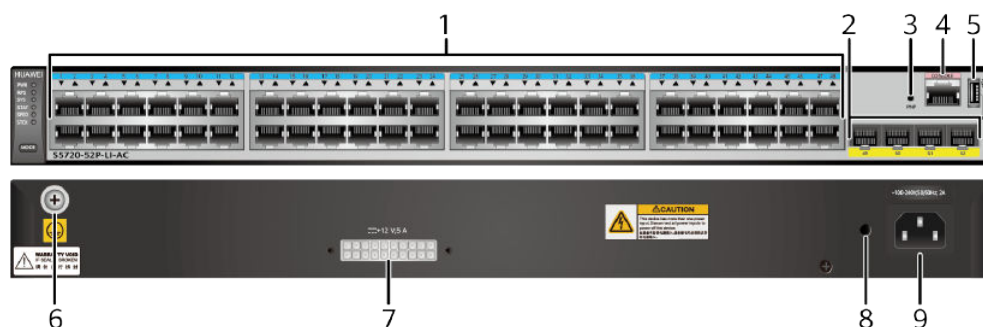
[Table 4-255](#) lists the mapping between the S5720-52P-LI-AC chassis and software versions.

**Table 4-255** Version mapping

Series	Model	Software Version
S5720-LI	S5720-52P-LI-AC	V200R011C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-98** S5720-52P-LI-AC appearance





1	Forty-eight 10/100/1000BASE-T ports	<p>2</p> <p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only used for stack connection)</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m AOC cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p>A license can be activated on the switch to increase the speed of the four optical ports to 10 Gbit/s.</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables</b></li> </ul>
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			<p>(used for zero-configuration stacking, supported in V200R011C10 and later versions)</p> <ul style="list-style-type: none"> <li>• H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</li> </ul> <p><b>NOTE</b> If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p><b>NOTICE</b> Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	One console port
5	One USB port	6	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>
7	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <b>RPS cable</b>, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p><b>NOTE</b> It is used with an <b>AC power cable</b>.</p>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 4-256](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-256** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-257](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-257** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-258](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-258** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-259](#).

**Table 4-259** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

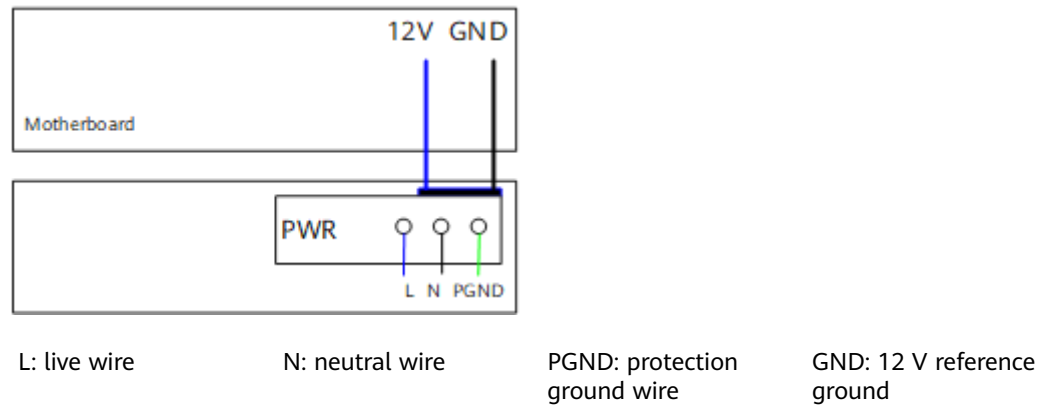
The S5720-52P-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720-52P-LI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-52P-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

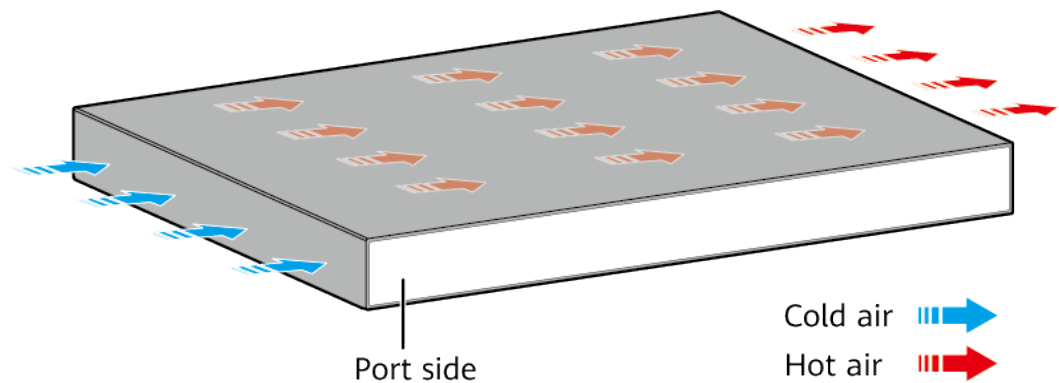
**Figure 4-99** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-99** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720-52P-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-260** lists technical specifications of the S5720-52P-LI-AC.

**Table 4-260** Technical specifications

Item	Description
Memory (RAM)	512 MB

Item	Description
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)</li> </ul>
Weight (with packaging)	4.4 kg (9.7 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	50.3 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	31.6 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 44.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010774

## 4.8.9 S5720-52P-PWR-LI-AC

### Version Mapping

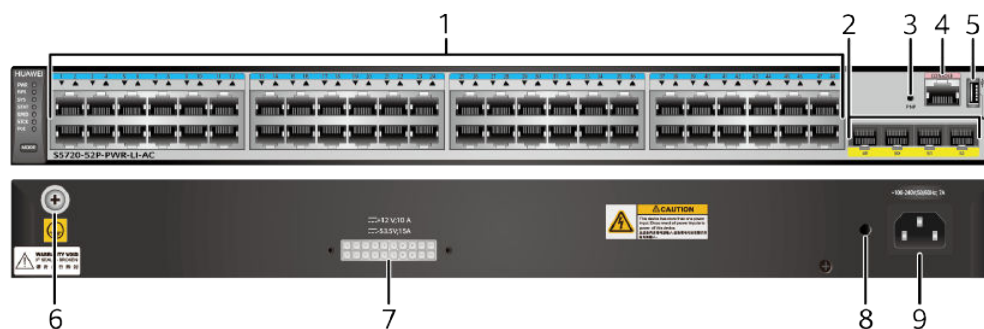
**Table 4-261** lists the mapping between the S5720-52P-PWR-LI-AC chassis and software versions.

**Table 4-261** Version mapping

Series	Model	Software Version
S5720-LI	S5720-52P-PWR-LI-AC	V200R011C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-100** S5720-52P-PWR-LI-AC appearance





1	Forty-eight PoE+ 10/100/1000BASE-T ports	<p>2</p> <p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only used for stack connection)</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m AOC cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p>A license can be activated on the switch to increase the speed of the four optical ports to 10 Gbit/s.</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables</b></li> </ul>
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			<p>(used for zero-configuration stacking, supported in V200R011C10 and later versions)</p> <ul style="list-style-type: none"> <li>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</li> </ul> <p><b>NOTE</b> If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p><b>NOTICE</b> Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	One console port
5	One USB port	6	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>
7	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <b>RPS cable</b>, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p><b>NOTE</b> It is used with an <b>AC power cable</b>.</p>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 4-262](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-262** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-263](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-263** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-264](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-264** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-265](#).

**Table 4-265** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

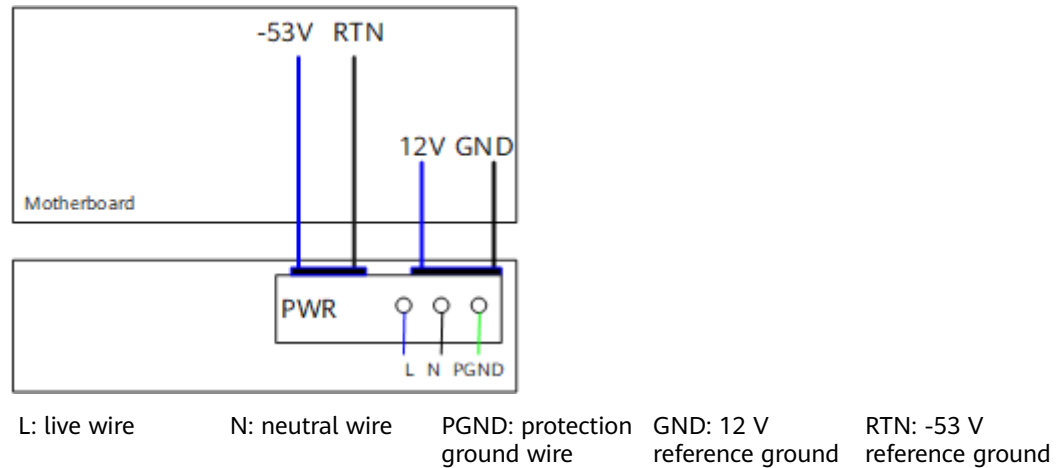
The S5720-52P-PWR-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-52P-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch can connect to an RPS1800 power supply. The RPS1800 only provides system power redundancy and does not increase the PoE capacity of the switch.

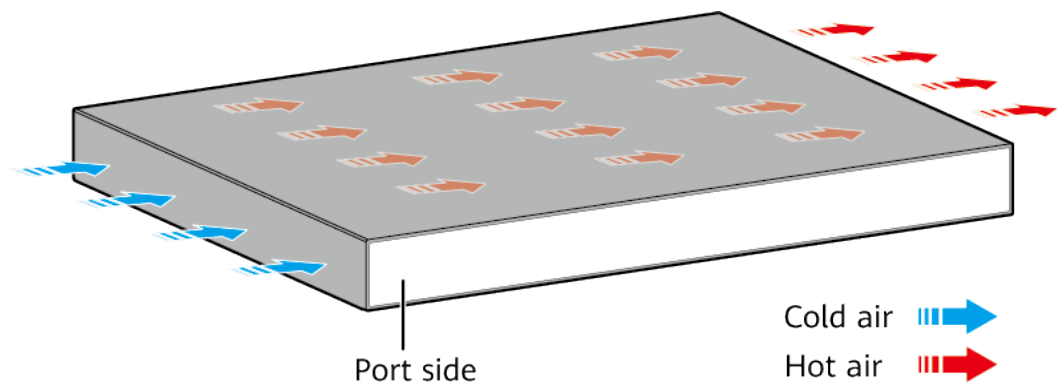
**Figure 4-101** shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

**Figure 4-101** Power supply by a built-in AC PoE power module



## Heat Dissipation

The S5720-52P-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-266** lists technical specifications of the S5720-52P-PWR-LI-AC.

**Table 4-266** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	38 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"><li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.)</li><li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)</li></ul>
Weight (with packaging)	5.6 kg (12.35 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"><li>Not providing the PoE function: 63.5 W</li><li>100% PoE loads: 464.3 W (system power consumption: 94.7 W, PoE: 369.6 W)</li></ul>

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	42.2 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 48.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010776

## 4.8.10 S5720-16X-PWH-LI-AC

### Version Mapping

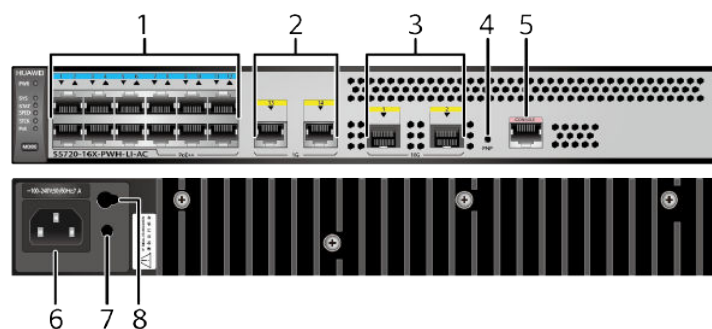
[Table 4-267](#) lists the mapping between the S5720-16X-PWH-LI-AC chassis and software versions.

**Table 4-267** Version mapping

Series	Model	Software Version
S5720-LI	S5720-16X-PWH-LI-AC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-102** S5720-16X-PWH-LI-AC appearance



1	Twelve PoE++ 10/100/1000BASE-T ports	2	Two 10/100/1000BASE-T ports
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3	<p>Two 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>10.18 Industrial Optical Modules</b></li> <li>• <b>GE copper module</b></li> <li>• <b>1 m, 3 m, 5 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTICE</b></p> <p>The switch cannot enter the standby mode if it has optical modules installed on its optical ports.</p> <p>If the switch is in the standby mode, installing optical modules on its optical interface will cause the switch to exit from the standby mode.</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	<p>One console port</p>	6	<p>AC socket</p> <p><b>NOTE</b></p> <p>It is used with an <b>AC power cable</b>.</p>
7	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b></p> <p>The AC power cable locking strap is not delivered with the switch.</p>	8	<p>Jack for a connection box adapter plate</p>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 4-268](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-268** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-269](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-269** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-270](#).

**Table 4-270** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

## Indicator Description

The S5720-16X-PWH-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720-16X-PWH-LI-AC does not have an RPS or USB indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-16X-PWH-LI-AC has a built-in power module and does not support pluggable power modules. The S5720-16X-PWH-LI-AC is a PoE switch and its built-in power module is a PoE power module.

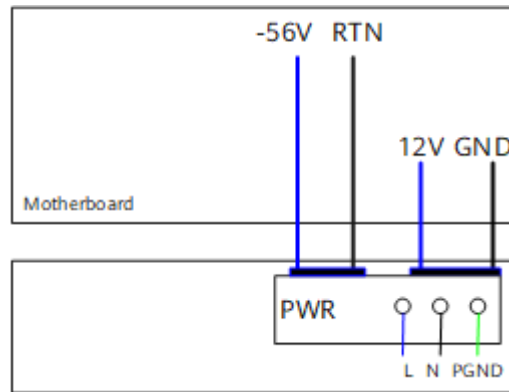
**Table 4-271** PoE power supply capacity of the built-in power module

Available PoE Power	Maximum Number of Ports (Fully Loaded)
360 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 12</li><li>802.3at (30 W per port): 12</li><li>802.3bt (60 W per port): 6</li></ul>

The S5720-16X-PWH-LI-AC supports the standby mode. In this mode, the switch does not provide PoE power supply and works in low-power state. All ports of the switch, except GE0/0/13 and GE0/0/14, are shut down in the standby mode.

[Figure 4-103](#) shows the power supply mode of the power module in the S5720-16X-PWH-LI-AC switch. The power module receives AC power from an external power source and provides two outputs: 12 V and -56 V. By default, the -56 V output voltage is provided to the switch and powered devices (PDs) connected to the switch. After the switch enters the standby mode, only the 12 V output voltage is provided for power supply of the switch.

**Figure 4-103** Power supply by a built-in AC PoE power module



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -56 V reference ground

## Heat Dissipation

The S5720-16X-PWH-LI-AC has no fans and uses natural heat dissipation.

## Technical Specifications

[Table 4-272](#) lists technical specifications of the S5720-16X-PWH-LI-AC.

**Table 4-272** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	9.3 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 320.0 mm x 263.0 mm (1.72 in. x 12.6 in. x 10.35 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 324.3 mm x 269.7 mm (1.72 in. x 12.77 in. x 10.62 in.)</li> </ul>
Weight (with packaging)	4.7 kg (10.36 lb)
Stack ports	All electrical ports and optical ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 31.5 W</li> <li>100% PoE loads: 437.5 W (system power consumption: 77.5 W, PoE: 360 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	30.9 W
Operating temperature	<p>0°C to 55°C (32°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature range for the switch is 0°C to 45°C (32°F to 113°F) if the switch uses optical modules.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010657

## 4.8.11 S5720-28X-LI-AC

### Version Mapping

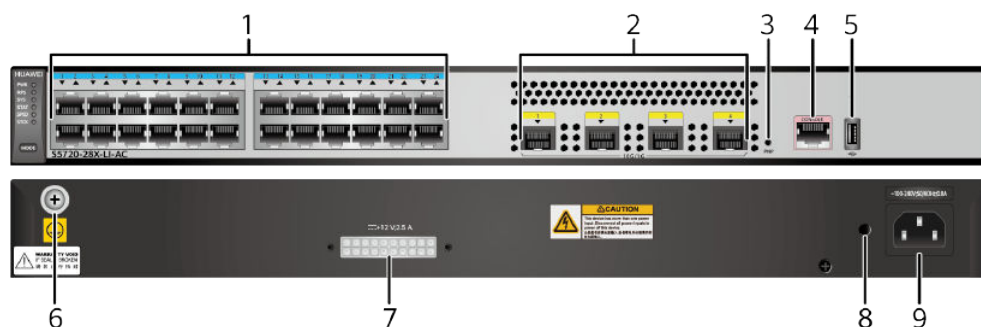
[Table 4-273](#) lists the mapping between the S5720-28X-LI-AC chassis and software versions.

**Table 4-273** Version mapping

Series	Model	Software Version
S5720-LI	S5720-28X-LI-AC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-104** S5720-28X-LI-AC appearance



1	<p>Twenty-four 10/100/1000BASE-T ports</p>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>A switch can use a maximum of two 10GE optical modules with 40 km or longer transmission distances.</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>One USB port</p>	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>

7	RPS socket  <b>NOTE</b> It is used with an <a href="#">RPS cable</a> , which is not hot swappable.	8	Jack for AC power cable locking strap  <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket  <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-274](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-274** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-275](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-275** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae



Attribute	Description
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-276](#).

**Table 4-276** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

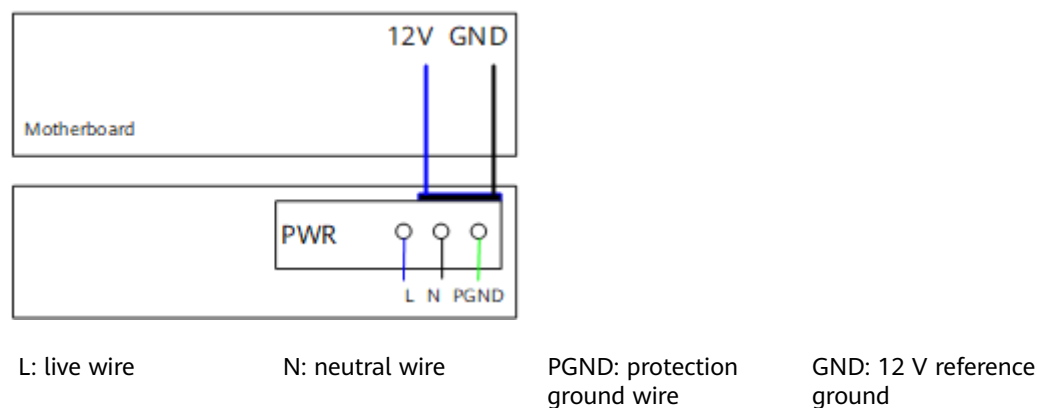
The S5720-28X-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720-28X-LI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-28X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

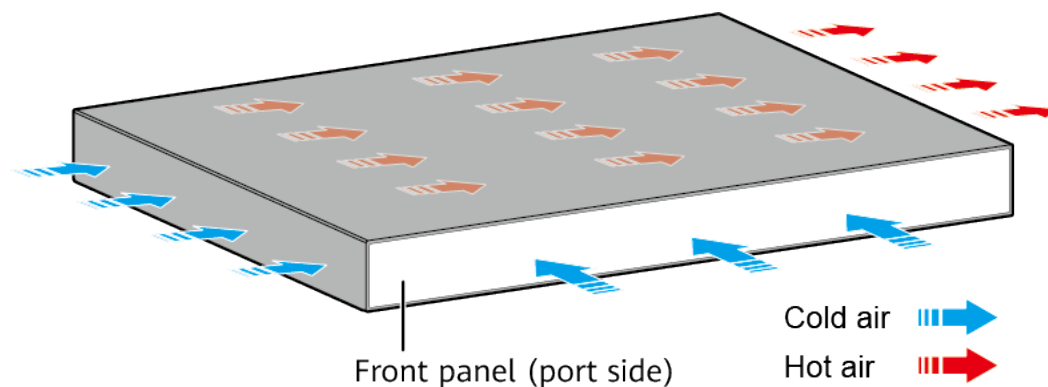
**Figure 4-105** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-105** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720-28X-LI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-277** lists technical specifications of the S5720-28X-LI-AC.

**Table 4-277** Technical specifications

Item	Description
Memory (RAM)	512 MB

Item	Description
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	45 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)</li> </ul>
Weight (with packaging)	3.9 kg (8.6 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	29.5 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	21.4 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 47 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010581

## 4.8.12 S5720-28X-LI-DC

### Version Mapping

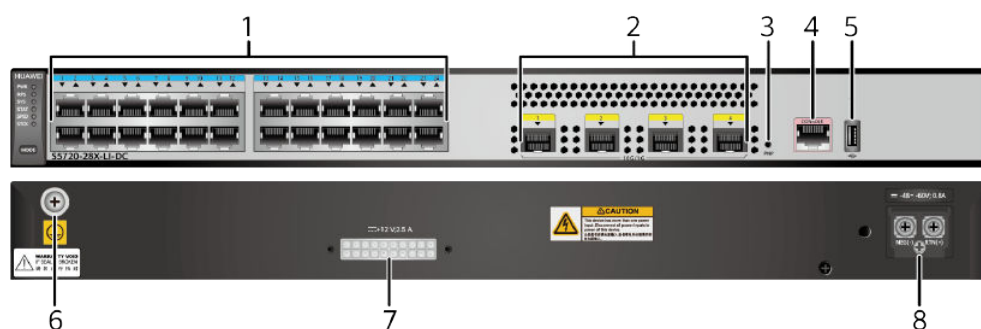
[Table 4-278](#) lists the mapping between the S5720-28X-LI-DC chassis and software versions.

**Table 4-278** Version mapping

Series	Model	Software Version
S5720-LI	S5720-28X-LI-DC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-106** S5720-28X-LI-DC appearance



1	<p>Twenty-four 10/100/1000BASE-T ports</p>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>A switch can use a maximum of two 10GE optical modules with 40 km or longer transmission distances.</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>One USB port</p>	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>

7	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <a href="#">RPS cable</a>, which is not hot swappable.</p>	8	<p>DC power terminal</p> <p><b>NOTE</b> It is used together with a <a href="#">DC Power Cable</a>.</p>
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-279](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-279** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-280](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-280** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 4-281](#).

**Table 4-281** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-28X-LI-DC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720-28X-LI-DC does not have a PoE mode indicator. For details, see [Indicator Description](#).

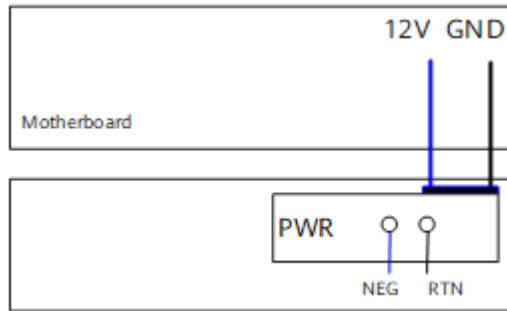
## Power Supply Configuration

The S5720-28X-LI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 4-107](#) shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.



**Figure 4-107** Power supply by a single DC power module



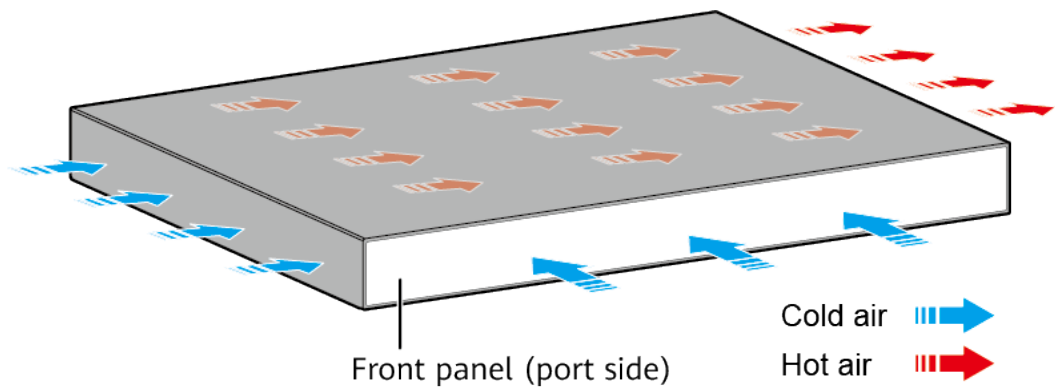
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

## Heat Dissipation

The S5720-28X-LI-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-282](#) lists technical specifications of the S5720-28X-LI-DC.

**Table 4-282** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	45 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 1$ kV in differential mode, $\pm 2$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)</li> </ul>
Weight (with packaging)	4 kg (8.82 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	31 W
Typical power consumption (30% of traffic load)	19.8 W
	<ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"><li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li><li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li><li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li></ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 47 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-3000 m (0-9483 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	98010582

### 4.8.13 S5720-28X-LI-24S-AC

## Version Mapping

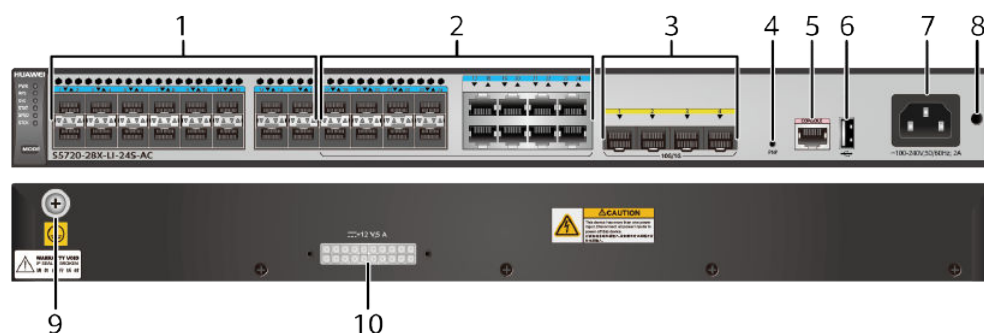
**Table 4-283** lists the mapping between the S5720-28X-LI-24S-AC chassis and software versions.

**Table 4-283** Version mapping

Series	Model	Software Version
S5720-LI	S5720-28X-LI-24S-AC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-108** S5720-28X-LI-24S-AC appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions)</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> </ul>	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions)</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b> If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	<p>One PNP button</p> <p><b>NOTICE</b> Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	One USB port
7	<p>AC socket</p> <p><b>NOTE</b> It is used with an <b>AC power cable</b>.</p>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>
9	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	10	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <b>RPS cable</b>, which is not hot swappable.</p>

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-284](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-284** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-285](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-285** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-286](#).

**Table 4-286** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

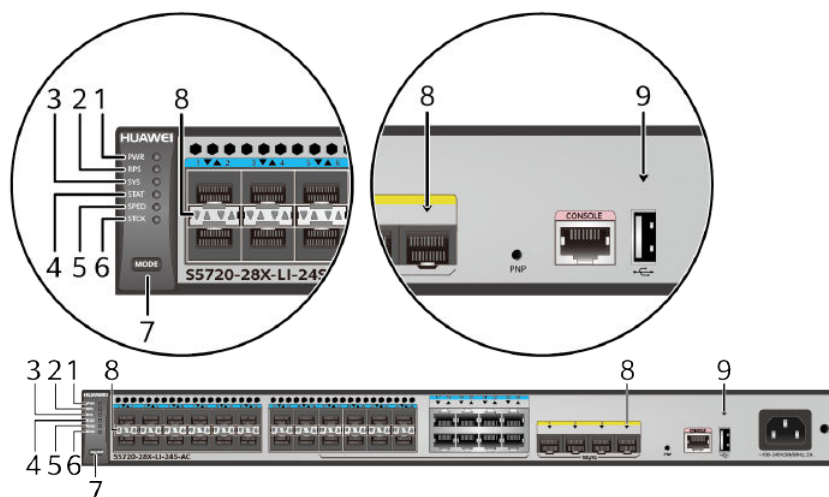
## Indicator Description

### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-109 Indicators on the S5720-28X-LI-24S-AC



### NOTE

The S5720-LI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators of a switch. If the switch fails, its SYS indicator and mode indicators can be configured to blink red fast so that field maintenance personnel can find this faulty switch.

Table 4-287 Description of indicators on the switch

No.	Indicator/ Button	Name	Color	Status	Description
1	PWR	Power module	-	Off	The switch is powered off.



No.	Indicator/ Button	Name	Color	Status	Description
		indicator	Green	Steady on	The system power supply is normal.
			Yellow	Steady on	The built-in power module has failed, and the switch is receiving power from a redundant power supply (RPS).
2	RPS	RPS indicator	-	Off	The switch is not connected to an RPS.
			Green	Steady on	The RPS is in cold standby state.
			Green	Blinking	The RPS is supplying power to another switch.
			Yellow	Blinking	The RPS is supplying power to the local switch, and the built-in power module of the switch has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator/ Button	Name	Color	Status	Description
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>

No.	Indicator/ Button	Name	Color	Status	Description
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-288</a> and <a href="#">Table 4-289</a> .		
9	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-288** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

**Table 4-289** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.

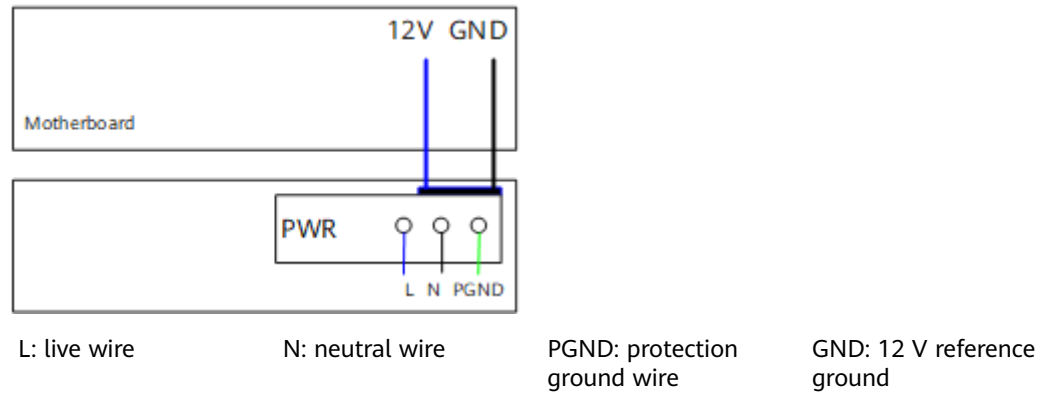
Display Mode	Color	Status	Description
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>• If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5720-28X-LI-24S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

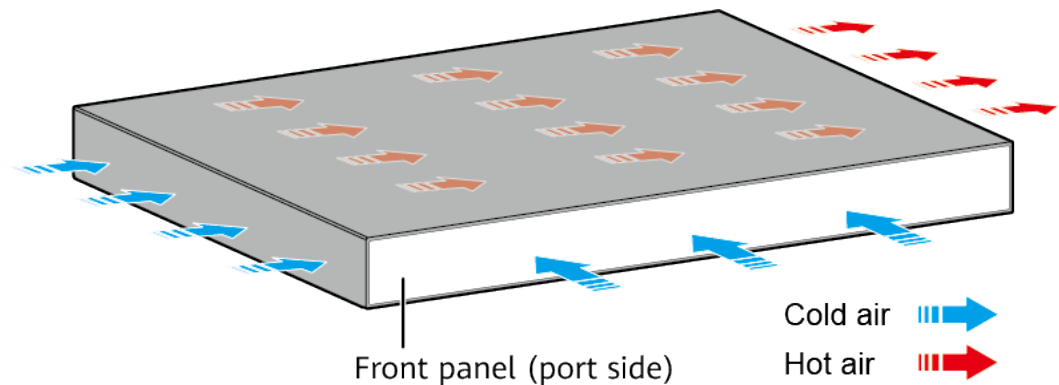
**Figure 4-110** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-110** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720-28X-LI-24S-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-290** lists technical specifications of the S5720-28X-LI-24S-AC.

**Table 4-290** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	41 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)</li> </ul>
Weight (with packaging)	4.1 kg (9.04 lb)
Stack ports	GE SFP optical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	41.7 W
Typical power consumption (30% of traffic load)	28.9 W <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"><li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li><li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li><li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li></ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 43 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	98010629

## 4.8.14 S5720-28X-LI-24S-DC



## Version Mapping

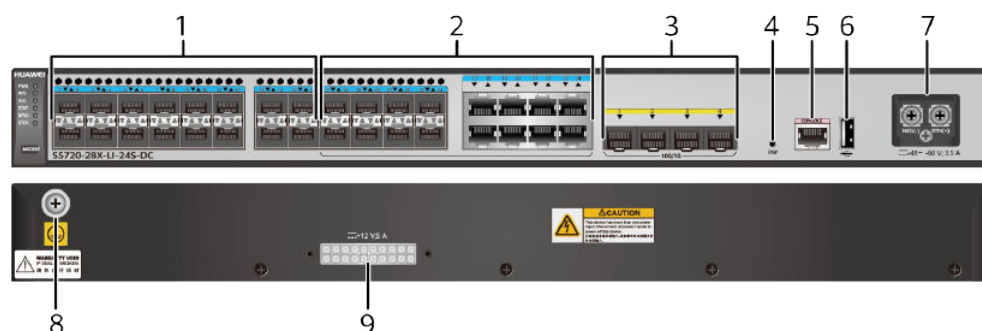
**Table 4-291** lists the mapping between the S5720-28X-LI-24S-DC chassis and software versions.

**Table 4-291** Version mapping

Series	Model	Software Version
S5720-LI	S5720-28X-LI-24S-DC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-111** S5720-28X-LI-24S-DC appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions)</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> </ul>	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions)</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b> If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	<p>One PNP button</p> <p><b>NOTICE</b> Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	One USB port
7	<p>DC power terminal</p> <p><b>NOTE</b> It is used together with a <b>DC Power Cable</b>.</p>	8	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>
9	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <b>RPS cable</b>, which is not hot swappable.</p>	-	-

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-292](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-292** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-293](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-293** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-294](#).

**Table 4-294** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

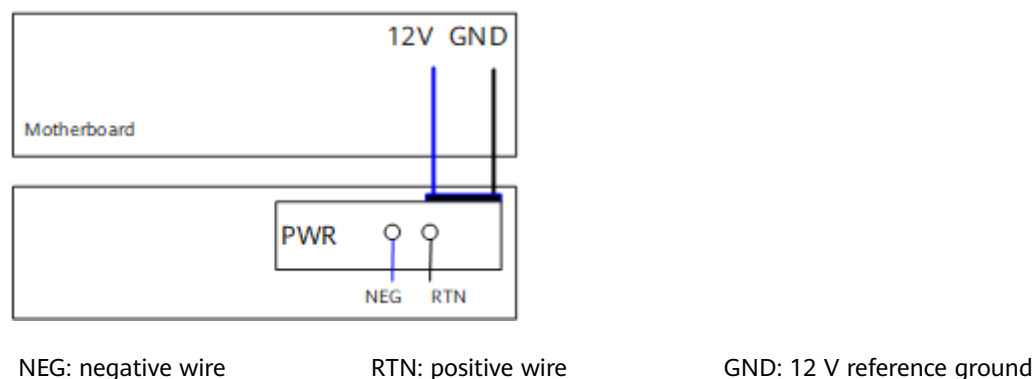
The S5720-28X-LI-24S-DC has the same types of indicators as the S5720-28X-LI-24S-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-28X-LI-24S-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

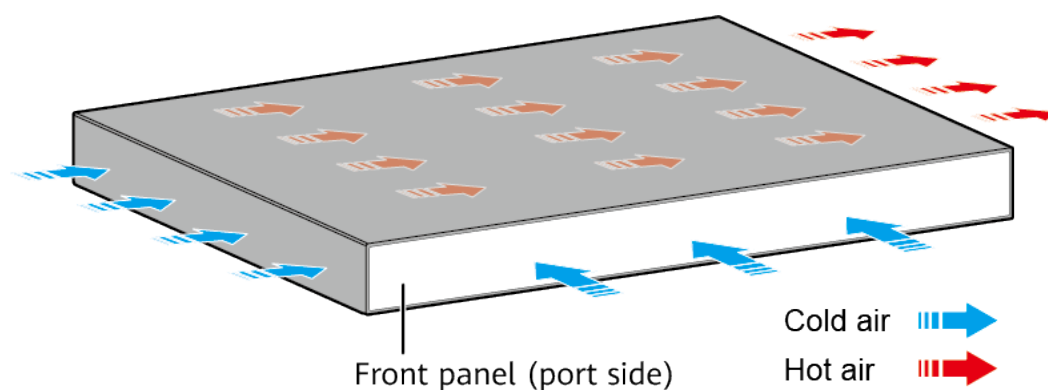
**Figure 4-112** shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

**Figure 4-112** Power supply by a single DC power module



## Heat Dissipation

The S5720-28X-LI-24S-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-295** lists technical specifications of the S5720-28X-LI-24S-DC.

**Table 4-295** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 1$ kV in differential mode, $\pm 2$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)</li> </ul>
Weight (with packaging)	4.1 kg (9.04 lb)
Stack ports	GE SFP optical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	42.7 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	30.3 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b>                      When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b>                      When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 43 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010631

## 4.8.15 S5720-28X-PWR-LI-AC

### Version Mapping

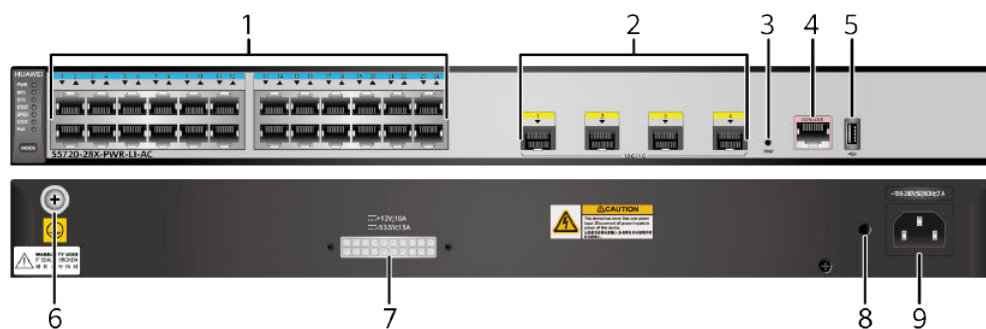
[Table 4-296](#) lists the mapping between the S5720-28X-PWR-LI-AC chassis and software versions.

**Table 4-296** Version mapping

Series	Model	Software Version
S5720-LI	S5720-28X-PWR-LI-AC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-113** S5720-28X-PWR-LI-AC appearance





1	<p>Twenty-four PoE + 10/100/1000BASE-T ports</p>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>One USB port</p>	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>

7	RPS socket  <b>NOTE</b> It is used with an <a href="#">RPS cable</a> , which is not hot swappable.	8	Jack for AC power cable locking strap  <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket  <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-297](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-297** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-298](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-298** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-299](#).

**Table 4-299** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

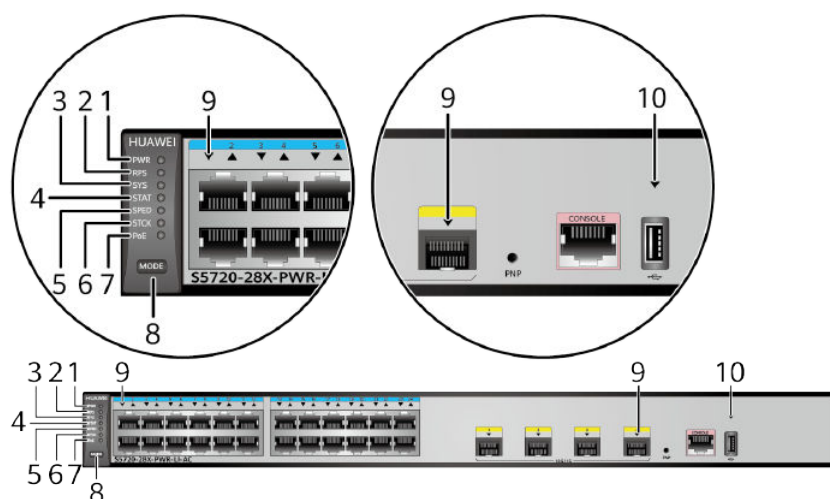
## Indicator Description

### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-114** Indicators on the S5720-28X-PWR-LI-AC



### NOTE

The S5720-LI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators of a switch. If the switch fails, its SYS indicator and mode indicators can be configured to blink red fast so that field maintenance personnel can find this faulty switch.

**Table 4-300** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.

No.	Indicator	Name	Color	Status	Description
			Yellow	Steady on	<ul style="list-style-type: none"> <li>The built-in power module has failed, and the switch is receiving power from a redundant power supply (RPS).</li> <li>The built-in PoE power module has failed.</li> </ul>
2	RPS	RPS indicator	-	Off	The switch is not connected to an RPS.
			Green	Steady on	The RPS is in cold standby state.
			Green	Blinking	The RPS is supplying power to another switch.
			Yellow	Blinking	The RPS is supplying power to the local switch, and the built-in power module of the switch has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>

No.	Indicator	Name	Color	Status	Description
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-301</a> .		
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-301** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> <li>• The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.</li> <li>• The total power consumption of PDs has reached the maximum power of the switch.</li> <li>• The manual power management mode is used and the port is not enabled to provide power to the PD.</li> </ul>
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>



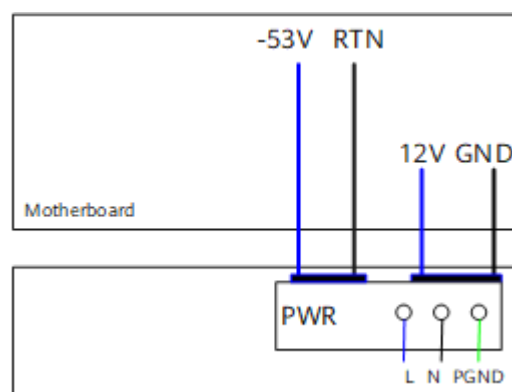
Display Mode	Color	Status	Description
	Green	Blinking	<p>The switch is the master switch in a stack.</p> <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5720-28X-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch can connect to an RPS1800 power supply. The RPS1800 only provides system power redundancy and does not increase the PoE capacity of the switch.

**Figure 4-115** shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

**Figure 4-115** Power supply by a built-in AC PoE power module



L: live wire

N: neutral wire

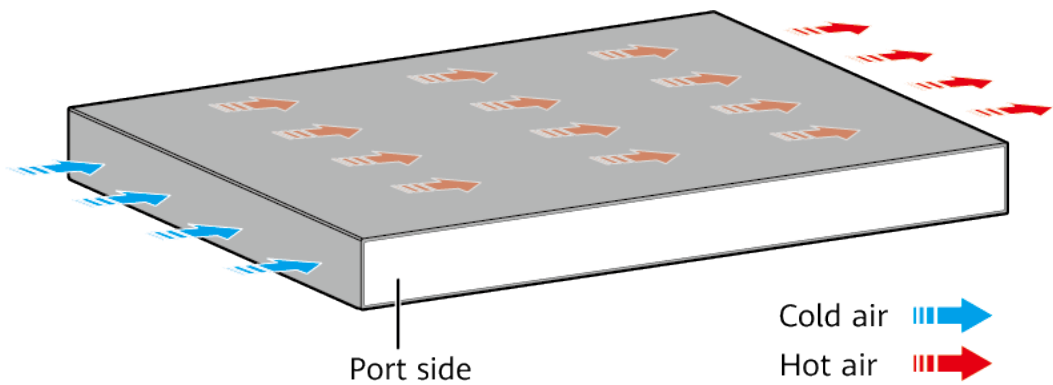
PGND: protection  
ground wire

GND: 12 V  
reference ground

RTN: -53 V  
reference ground

## Heat Dissipation

The S5720-28X-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-302** lists technical specifications of the S5720-28X-PWR-LI-AC.

**Table 4-302** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)</li> </ul>
Weight (with packaging)	5.2 kg (11.45 lb)

Item	Description
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>• Not providing the PoE function: 42.7 W</li> <li>• 100% PoE loads: 448.5 W (system power consumption: 78.9 W, PoE: 369.6 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	29.5 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b>                      When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010593

## 4.8.16 S5720-28X-PWR-LI-ACF

### Version Mapping

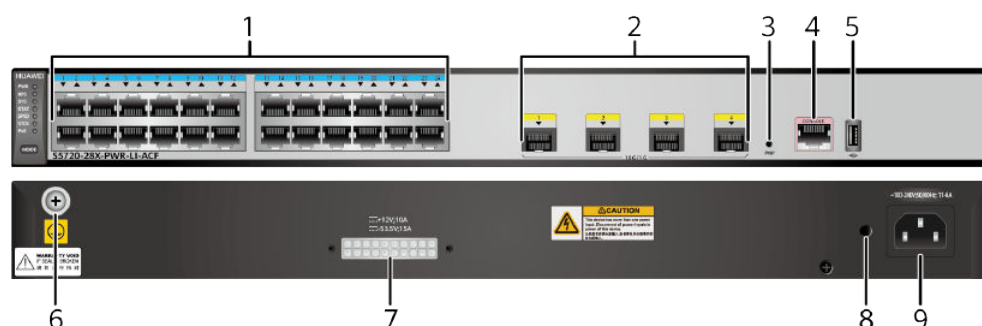
**Table 4-303** lists the mapping between the S5720-28X-PWR-LI-ACF chassis and software versions.

**Table 4-303** Version mapping

Series	Model	Software Version
S5720-LI	S5720-28X-PWR-LI-ACF	V200R013C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-116** S5720-28X-PWR-LI-ACF appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> <li>• <b>H87MMA5671A2 GPON optical module</b></li> </ul> <b>NOTE</b> If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.
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3	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	One console port
5	One USB port	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <a href="#">ground cable</a>.</p>
7	<p>RPS socket</p> <p><b>NOTE</b></p> <p>It is used with an <a href="#">RPS cable</a>, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b></p> <p>The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p><b>NOTE</b></p> <p>It is used with an <a href="#">AC power cable</a>.</p>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-304](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-304** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-305](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-305** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-306](#).

**Table 4-306** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

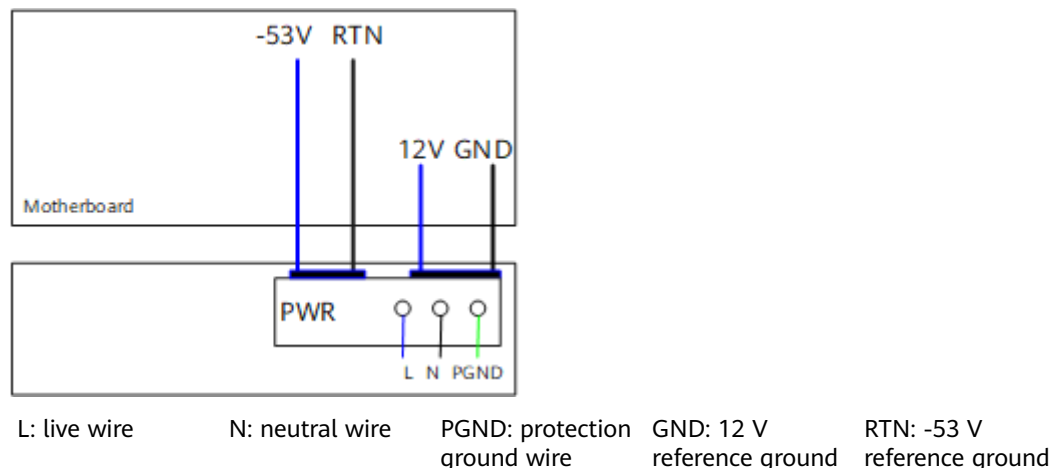
The S5720-28X-PWR-LI-ACF has the same types of indicators as the S5720-28X-PWR-LI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-28X-PWR-LI-ACF has a built-in power module and does not support pluggable power modules. The built-in power module can provide 740 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or 802.3at. The switch can connect to an RPS1800 power supply. The RPS1800 only provides system power redundancy and does not increase the PoE capacity of the switch.

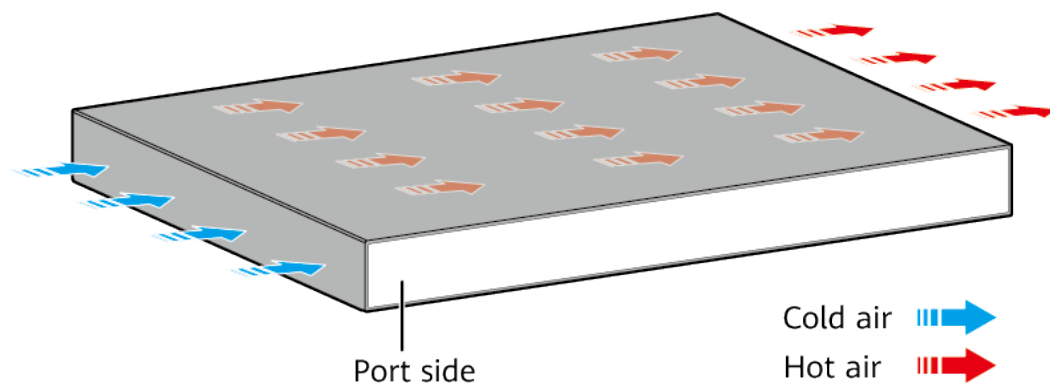
**Figure 4-117** shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

**Figure 4-117** Power supply by a built-in AC PoE power module



## Heat Dissipation

The S5720-28X-PWR-LI-ACF has two built-in fans for forced air cooling. The airflow direction is left-to-right.





 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-307** lists technical specifications of the S5720-28X-PWR-LI-ACF.

**Table 4-307** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)</li> </ul>
Weight (with packaging)	5.9 kg (13.01 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>• Not providing the PoE function: 45 W</li> <li>• 100% PoE loads: 984 W (PoE: 739.2 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	33 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 59.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010595

## 4.8.17 S5720-28X-PWH-LI-AC

### Version Mapping

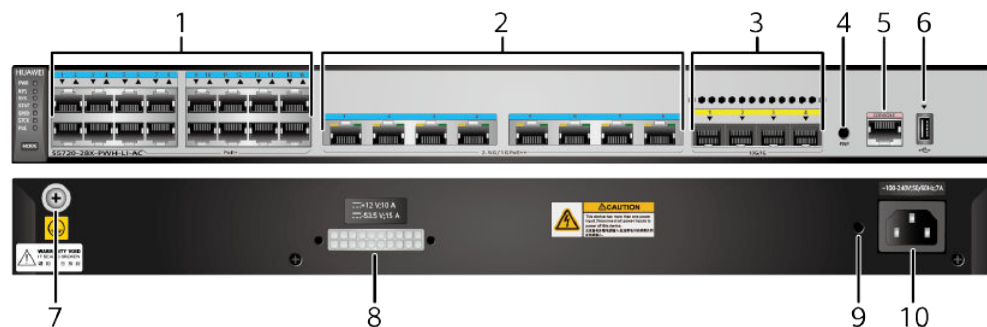
**Table 4-308** lists the mapping between the S5720-28X-PWH-LI-AC chassis and software versions.

**Table 4-308** Version mapping

Series	Model	Software Version
S5720-LI	S5720-28X-PWH-LI-AC	V200R011C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-118** S5720-28X-PWH-LI-AC appearance



1	Sixteen PoE+ 10/100/1000BASE-T ports	2	Eight PoE++ 100M/1000M/2.5G BASE-T ports (MultiGE port)
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b> If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	One USB port
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	8	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <b>RPS cable</b>, which is not hot swappable.</p>
9	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>	10	<p>AC socket</p> <p><b>NOTE</b> It is used with an <b>AC power cable</b>.</p>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 4-309](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-309** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 100M/1000M/2.5G BASE-T port

A 100M/1000M/2.5G BASE-T port (MultiGE port) sends and receives service data at 100 Mbit/s, 1 Gbit/s, or 2.5 Gbit/s, and must use an **Ethernet cable**. If the 2.5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category. [Table 4-310](#) describes the attributes of a 100M/1000M/2.5G BASE-T port.

**Table 4-310** Attributes of a 100M/1000M/2.5G BASE-T port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3u, IEEE802.3ab, IEEE802.3bz, mgbase-t
Working Mode	100/1000/2500 Mbit/s auto-sensing

A 100M/1000M/2.5G BASE-T port supports the connection with the following devices:

- All switches providing FE electrical interfaces or GE electrical interfaces
- All devices providing MultiGE interfaces defined by the NBASE-T Alliance
- All devices providing MultiGE interfaces that comply with the 802.3bz standard

[Table 4-311](#) lists the maximum transmission distances of different cables on MultiGE ports.

**Table 4-311** Maximum transmission distances of different cables on MultiGE ports

Cable Type (6-a-1 Bundle)	MultiGE Port (Different Rates)	
	100M/1000M	2.5GE
Category 5e unshielded twisted pair (Cat5e UTP)	100 m	100 m
Category 5e shielded twisted pair (Cat5e STP)	100 m	200 m Only the APs listed below are supported if the transmission distance is longer than 100 m: <ul style="list-style-type: none"> <li>• AP7052DN/ AP7152DN</li> <li>• AP6052DN</li> <li>• AP8082DN/ AP8182DN</li> <li>• AP7052DE</li> <li>• AP7060DN</li> </ul>
Category 6 unshielded twisted pair (Cat6 UTP)	100 m	100 m
Category 6 shielded twisted pair (Cat6 STP)	100 m	200 m Only the APs listed below are supported if the transmission distance is longer than 100 m: <ul style="list-style-type: none"> <li>• AP7052DN/ AP7152DN</li> <li>• AP6052DN</li> <li>• AP8082DN/ AP8182DN</li> <li>• AP7052DE</li> <li>• AP7060DN</li> </ul>
Category 6A unshielded twisted pair (Cat6A U/UTP)	100 m	100 m

Cable Type (6-a-1 Bundle)	MultiGE Port (Different Rates)	
	100M/1000M	2.5GE
Category 6A foiled/unshielded twisted pair (Cat6A F/UTP)	100 m	200 m Only the APs listed below are supported if the transmission distance is longer than 100 m: <ul style="list-style-type: none"><li>• AP7052DN/ AP7152DN</li><li>• AP6052DN</li><li>• AP8082DN/ AP8182DN</li><li>• AP7052DE</li><li>• AP7060DN</li></ul>
Category 6A shielded twisted pair (Cat6A STP)	100 m	200 m Only the APs listed below are supported if the transmission distance is longer than 100 m: <ul style="list-style-type: none"><li>• AP7052DN/ AP7152DN</li><li>• AP6052DN</li><li>• AP8082DN/ AP8182DN</li><li>• AP7052DE</li><li>• AP7060DN</li></ul>
Category 7 shielded twisted pair (Cat7)	100 m	200 m Only the APs listed below are supported if the transmission distance is longer than 100 m: <ul style="list-style-type: none"><li>• AP7052DN/ AP7152DN</li><li>• AP6052DN</li><li>• AP8082DN/ AP8182DN</li><li>• AP7052DE</li><li>• AP7060DN</li></ul>

 **NOTE**

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

**10GE SFP+ port**

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-312](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-312** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

**Console port**

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-313](#).

**Table 4-313** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

**USB port**

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.



**NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-28X-PWH-LI-AC has the same types of indicators as the S5720-28X-PWR-LI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

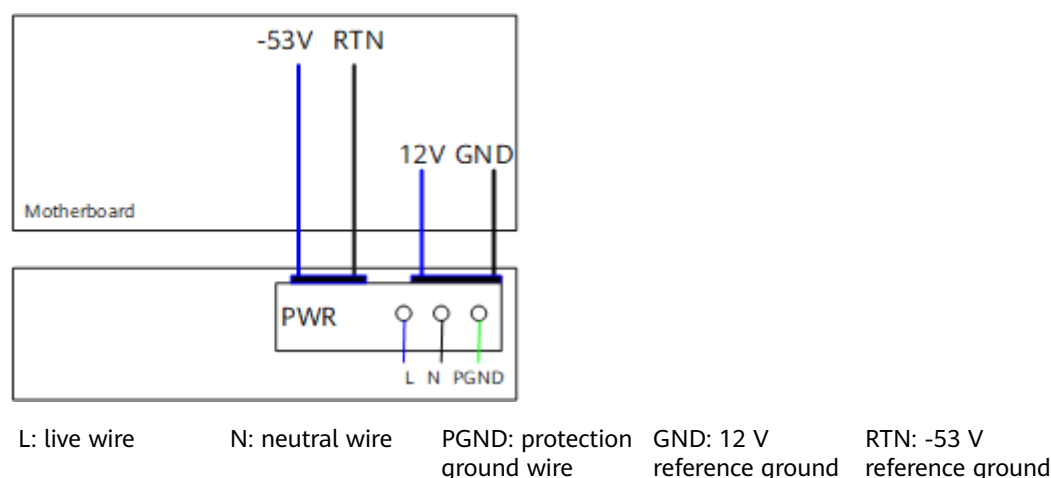
The S5720-28X-PWH-LI-AC has a built-in power module and does not support pluggable power modules. It is a PoE switch. In addition to the built-in PoE power module, the switch can also connect to an RPS1800 for power redundancy.

**Table 4-314** PoE power supply capacity of the built-in power module

Available PoE Power	Maximum Number of Ports (Fully Loaded)
360 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 23</li> <li>802.3at (30 W per port): 12</li> <li>802.3bt (60 W per port): 6 (only PoE++ ports)</li> </ul>

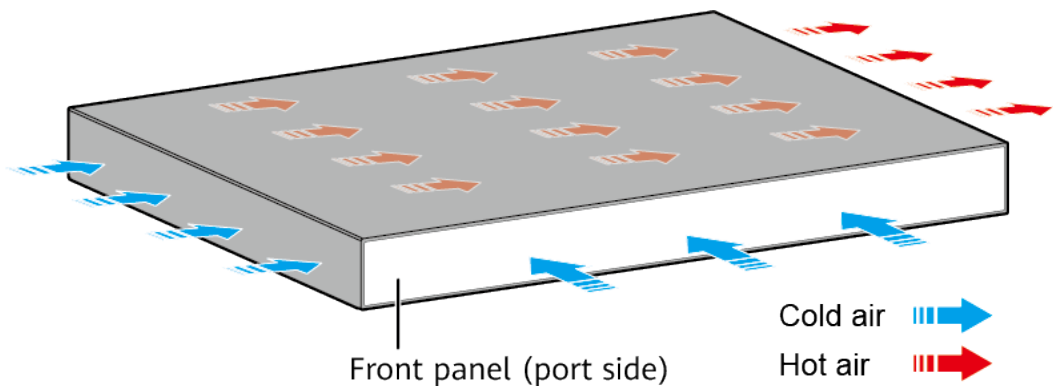
**Figure 4-119** shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

**Figure 4-119** Power supply by a built-in AC PoE power module



## Heat dissipation

The S5720-28X-PWH-LI-AC has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-315](#) lists technical specifications of the S5720-28X-PWH-LI-AC.

**Table 4-315** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	50.6 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"><li>• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.9 mm (1.72 in. x 17.4 in. x 12.39 in.)</li><li>• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.9 mm (1.72 in. x 17.4 in. x 12.75 in.)</li></ul>
Weight (with packaging)	5.9 kg (13.01 lb)
Stack ports	Sixteen 10/100/1000BASE-T ports and four 10GE SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none"><li>• Not providing the PoE function: 67.3 W</li><li>• 100% PoE loads: 473 W (system power consumption: 113 W, PoE: 360 W)</li></ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"><li>• Tested according to ATIS standard</li><li>• EEE enabled</li><li>• No PoE power consumption</li></ul>	51.6 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 55.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010659

## 4.8.18 S5720-52X-LI-AC

### Version Mapping

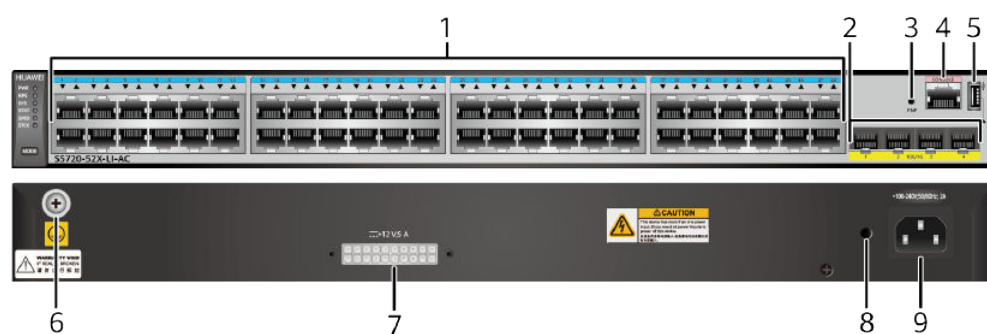
[Table 4-316](#) lists the mapping between the S5720-52X-LI-AC chassis and software versions.

**Table 4-316** Version mapping

Series	Model	Software Version
S5720-LI	S5720-52X-LI-AC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-120** S5720-52X-LI-AC appearance



1	<p>Forty-eight 10/100/1000BASE-T ports</p>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>One USB port</p>	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>

7	RPS socket  <b>NOTE</b> It is used with an <a href="#">RPS cable</a> , which is not hot swappable.	8	Jack for AC power cable locking strap  <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket  <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-317](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-317** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-318](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-318** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-319](#).

**Table 4-319** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-52X-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720-52X-LI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

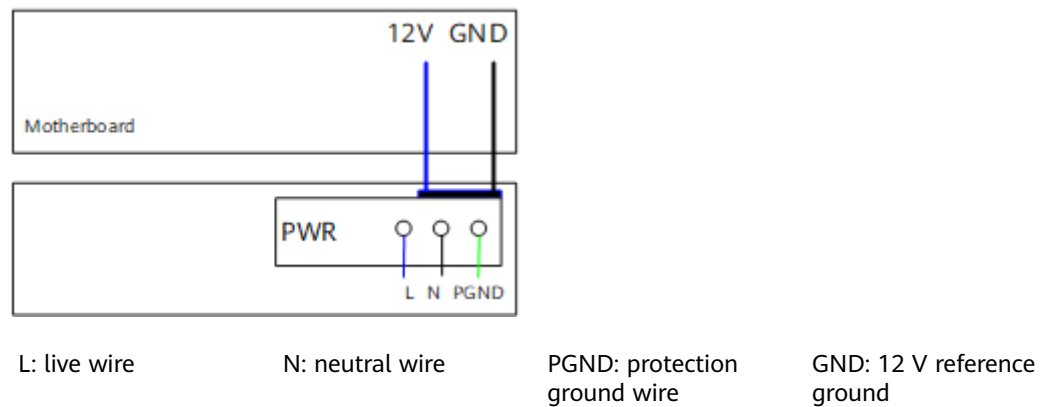
## Power Supply Configuration

The S5720-52X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.



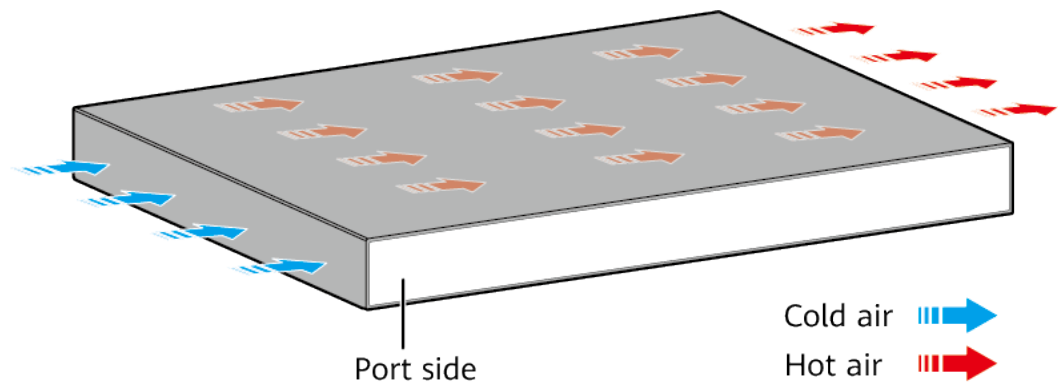
**Figure 4-121** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-121** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720-52X-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-320** lists technical specifications of the S5720-52X-LI-AC.

**Table 4-320** Technical specifications

Item	Description
Memory (RAM)	512 MB

Item	Description
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)</li> </ul>
Weight (with packaging)	4.4 kg (9.7 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	50.3 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	31.6 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 44.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010606

## 4.8.19 S5720-52X-LI-DC

### Version Mapping

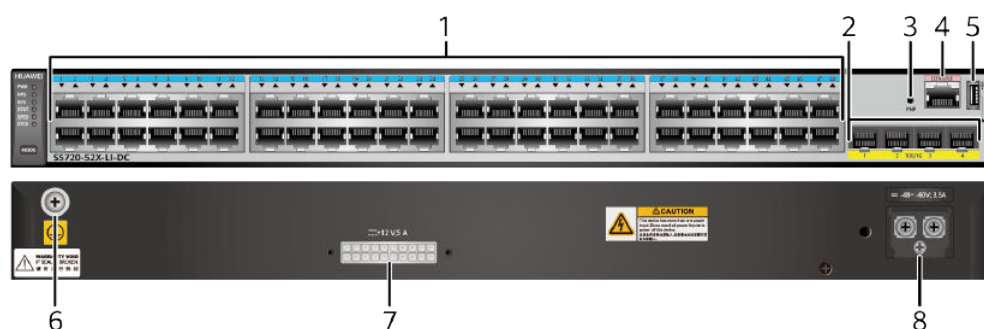
[Table 4-321](#) lists the mapping between the S5720-52X-LI-DC chassis and software versions.

**Table 4-321** Version mapping

Series	Model	Software Version
S5720-LI	S5720-52X-LI-DC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-122** S5720-52X-LI-DC appearance



1	<p>Forty-eight 10/100/1000BASE-T ports</p>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>One USB port</p>	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>

7	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <a href="#">RPS cable</a>, which is not hot swappable.</p>	8	<p>DC power terminal</p> <p><b>NOTE</b> It is used together with a <a href="#">DC Power Cable</a>.</p>
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-322](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-322** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-323](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-323** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 4-324](#).

**Table 4-324** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

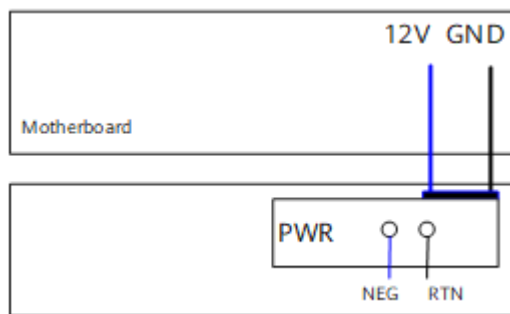
The S5720-52X-LI-DC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720-52X-LI-DC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-52X-LI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 4-123](#) shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

**Figure 4-123** Power supply by a single DC power module



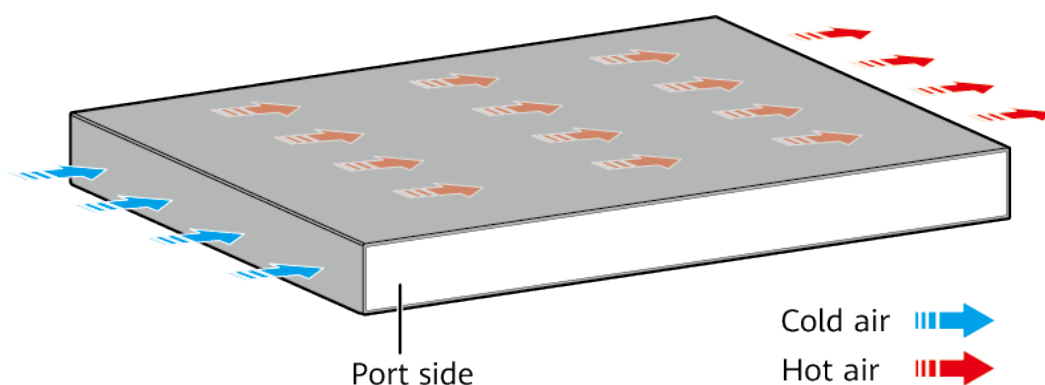
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

## Heat Dissipation

The S5720-52X-LI-DC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-325](#) lists technical specifications of the S5720-52X-LI-DC.

**Table 4-325** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	41 years



Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 1$ kV in differential mode, $\pm 2$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)</li> </ul>
Weight (with packaging)	4.4 kg (9.7 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	51.6 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	33.1 W

Item	Description
Operating temperature	<p>0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 44.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010607

## 4.8.20 S5720-52X-PWR-LI-AC

## Version Mapping

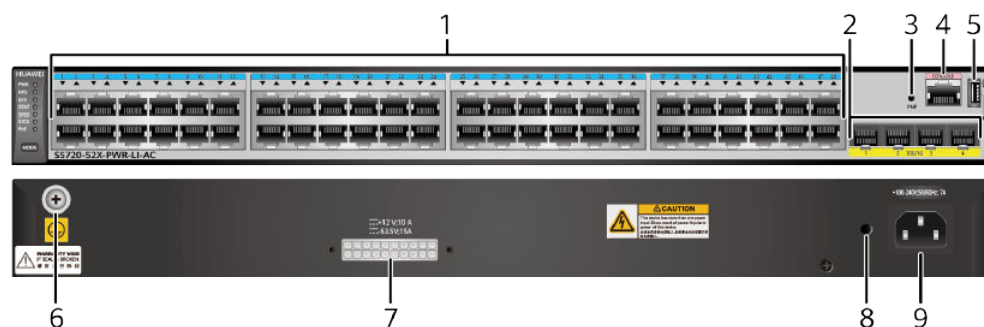
**Table 4-326** lists the mapping between the S5720-52X-PWR-LI-AC chassis and software versions.

**Table 4-326** Version mapping

Series	Model	Software Version
S5720-LI	S5720-52X-PWR-LI-AC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-124** S5720-52X-PWR-LI-AC appearance



1	<p>Forty-eight PoE+ 10/100/1000BASE-T ports</p>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>One USB port</p>	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>

7	RPS socket  <b>NOTE</b> It is used with an <a href="#">RPS cable</a> , which is not hot swappable.	8	Jack for AC power cable locking strap  <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket  <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-327](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-327** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-328](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-328** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-329](#).

**Table 4-329** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

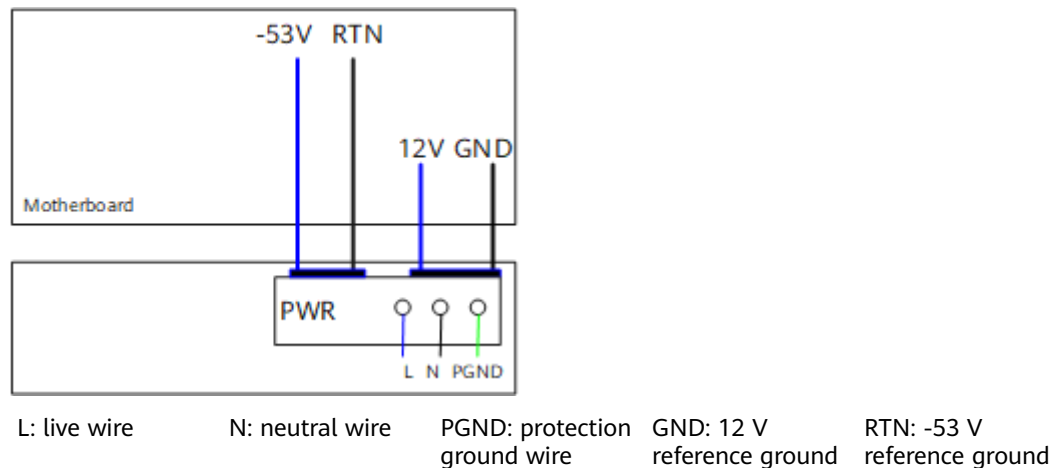
The S5720-52X-PWR-LI-AC has the same types of indicators as the S5720-28X-PWR-LI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-52X-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch can connect to an RPS1800 power supply. The RPS1800 only provides system power redundancy and does not increase the PoE capacity of the switch.

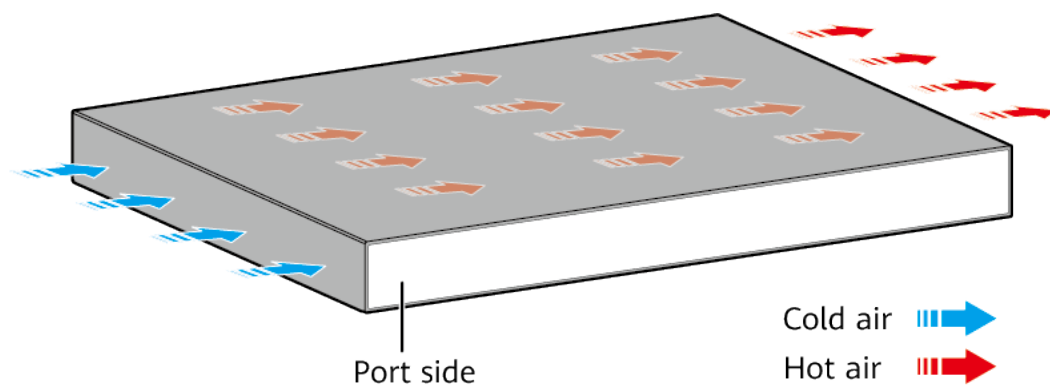
**Figure 4-125** shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

**Figure 4-125** Power supply by a built-in AC PoE power module



## Heat Dissipation

The S5720-52X-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-330** lists technical specifications of the S5720-52X-PWR-LI-AC.

**Table 4-330** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	38 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)</li> </ul>
Weight (with packaging)	5.6 kg (12.35 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 63.5 W</li> <li>100% PoE loads: 464.3 W (system power consumption: 94.7 W, PoE: 369.6 W)</li> </ul>



Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	42.2 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 48.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010619

## 4.8.21 S5720-52X-PWR-LI-ACF

### Version Mapping

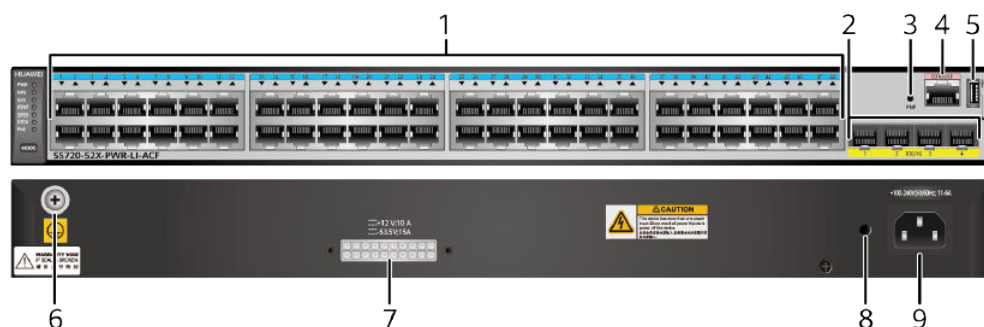
**Table 4-331** lists the mapping between the S5720-52X-PWR-LI-ACF chassis and software versions.

**Table 4-331** Version mapping

Series	Model	Software Version
S5720-LI	S5720-52X-PWR-LI-ACF	V200R011C10 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-126** S5720-52X-PWR-LI-ACF appearance



1	<p>Forty-eight PoE+ 10/100/1000BASE-T ports</p>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>One USB port</p>	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>

7	RPS socket  <b>NOTE</b> It is used with an <a href="#">RPS cable</a> , which is not hot swappable.	8	Jack for AC power cable locking strap  <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket  <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Interface Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-332](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-332** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-333](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-333** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-334](#).

**Table 4-334** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

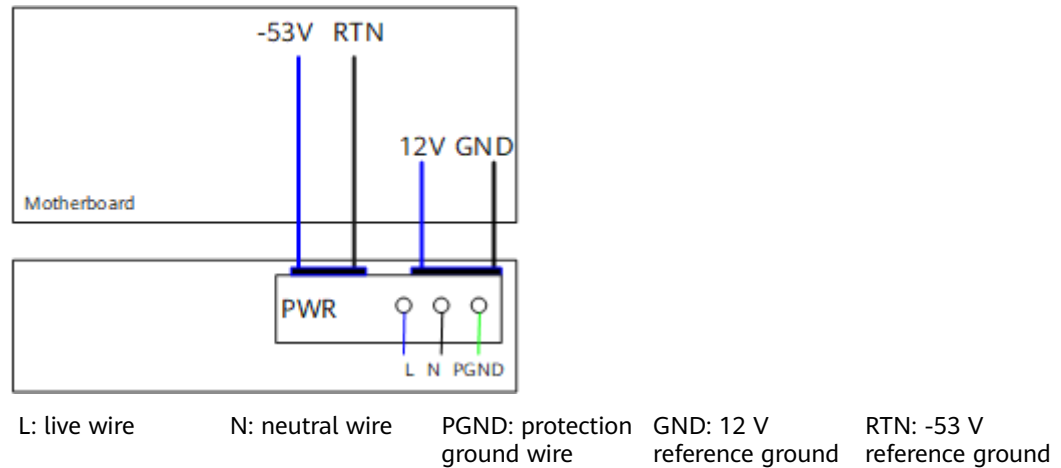
The S5720-52X-PWR-LI-ACF has the same types of indicators as the S5720-28X-PWR-LI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-52X-PWR-LI-ACF has a built-in power module and does not support pluggable power modules. The built-in power module can provide 740 W PoE power, which ensures full PoE power on 48 ports in compliance with 802.3af or on 24 ports in compliance with 802.3at. The switch can connect to an RPS1800 power supply. The RPS1800 only provides system power redundancy and does not increase the PoE capacity of the switch.

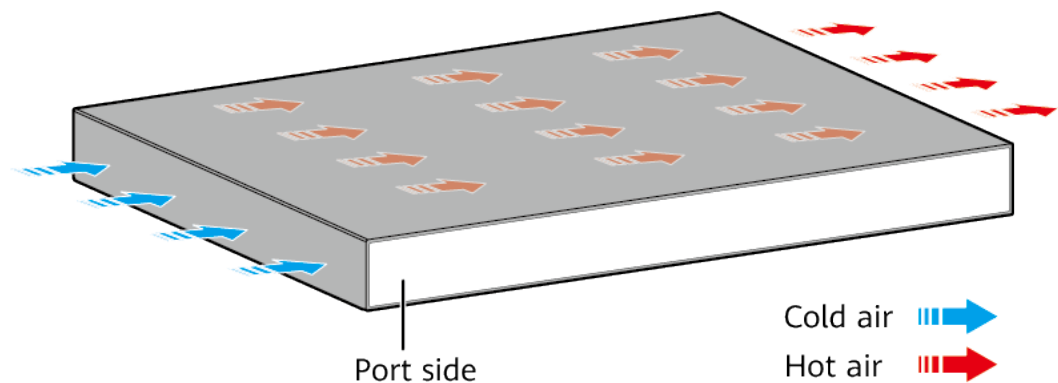
**Figure 4-127** shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

**Figure 4-127** Power supply by a built-in AC PoE power module



## Heat Dissipation

The S5720-52X-PWR-LI-ACF have two built-in fans for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-335** lists technical specifications of the S5720-52X-PWR-LI-ACF.

**Table 4-335** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	45 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)</li> </ul>
Weight (with packaging)	6.6 kg (14.55 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 52.1 W</li> <li>100% PoE loads: 977 W (system power consumption: 237.8 W, PoE: 739.2 W)</li> </ul>

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	42.9 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)



Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010621

## 4.8.22 S5720-52X-LI-48S-AC

### Version Mapping

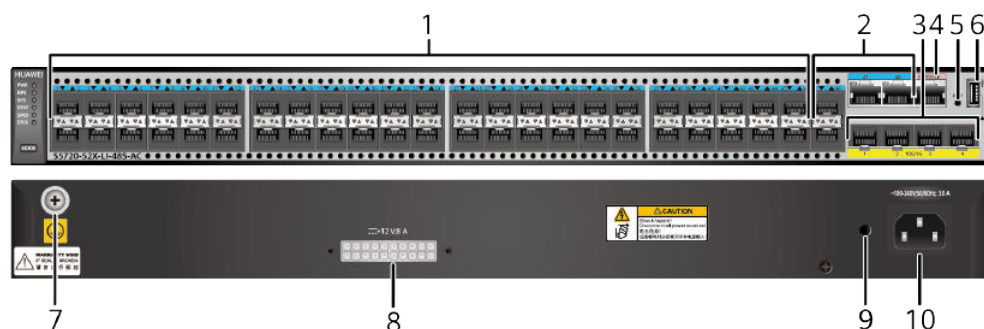
**Table 4-336** lists the mapping between the S5720-52X-LI-48S-AC chassis and software versions.

**Table 4-336** Version mapping

Series	Model	Software Version
S5720-LI	S5720-52X-LI-48S-AC	V200R013C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-128** S5720-52X-LI-48S-AC appearance



1	<p>Forty-six 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-CWDM optical module (for OADM scenarios only)</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> </ul>	2	<p>Two combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario)</b></li> </ul>
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ stack cables (only applicable to zero-configuration stacking)</b></li> <li>• <b>H87MMA5671A2 GPON optical module</b></li> </ul> <p><b>NOTE</b></p> <p>If one port uses a GPON optical module, other ports cannot be used.</p>	4	<p>One console port</p>
5	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>One USB port</p>

7	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	8	RPS socket <b>NOTE</b> It is used with an <b>RPS cable</b> , which is not hot swappable.
9	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	10	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-337](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-337** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

 NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-338](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-338** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-339](#).

**Table 4-339** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

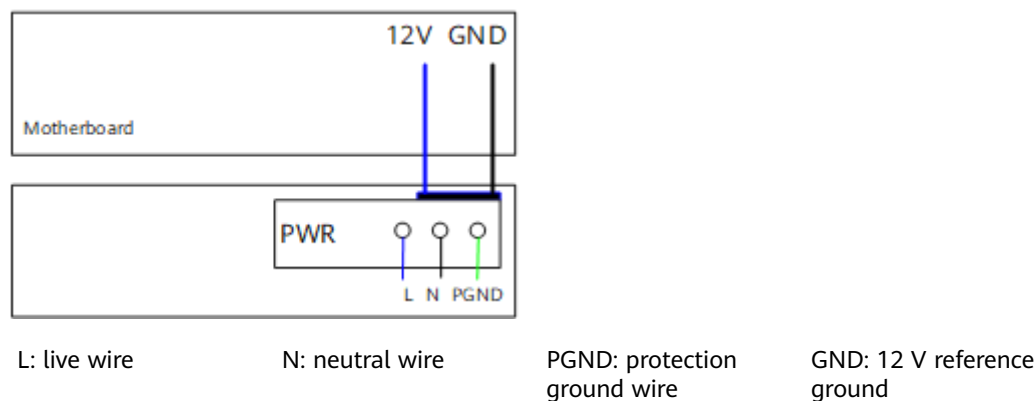
The S5720-52X-LI-48S-AC has the same types of indicators as the S5720-28X-LI-24S-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-52X-LI-48S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

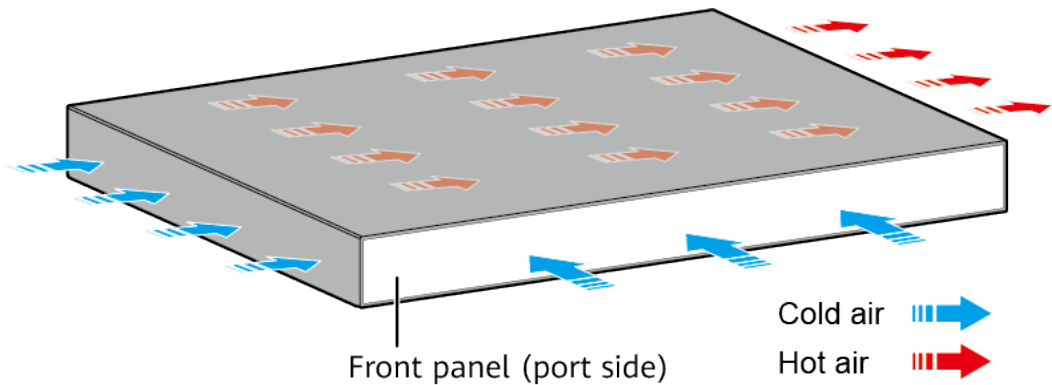
**Figure 4-129** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-129** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720-52X-LI-48S-AC has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-340](#) lists technical specifications of the S5720-52X-LI-48S-AC.

**Table 4-340** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	34.91 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.9 mm (1.72 in. x 17.4 in. x 9.21 in.)</li> </ul>
Weight (with packaging)	5.25 kg (11.57 lb)
Stack ports	GE optical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	83 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	68 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010813

## 4.9 S5720S-LI

### 4.9.1 S5720S-12TP-LI-AC



## Version Mapping

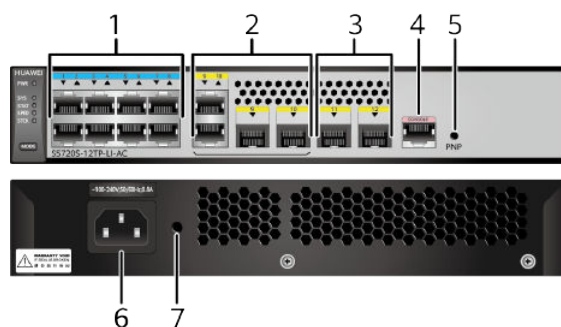
**Table 4-341** lists the mapping between the S5720S-12TP-LI-AC chassis and software versions.

**Table 4-341** Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-12TP-LI-AC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-130** S5720S-12TP-LI-AC appearance



1	Eight 10/100/1000BASE-T ports	2	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b> (the maximum transmission distance cannot exceed 40 km)</li> </ul>
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3	<p>Two 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b> (the maximum transmission distance cannot exceed 40 km)</li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only applicable to stack ports)</b></li> <li>• <b>1 m, 3 m, 5 m, 10 m SFP+ high-speed copper cables (only applicable to stack ports)</b></li> <li>• <b>3 m and 10 m AOC cables (only applicable to stack ports)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b>                  If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>	4	<p>One console port</p>
5	<p>One PNP button</p> <p><b>NOTICE</b>                  Applicable in V200R012C00 and later versions:                  To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.                  To reset the switch, press the button.                  Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>AC socket</p> <p><b>NOTE</b>                  It is used with an <b>AC power cable</b>.</p>
7	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b>                  The AC power cable locking strap is not delivered with the switch.</p>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-342](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-342** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission

speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-343](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-343** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-344](#).

**Table 4-344** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

## Indicator Description

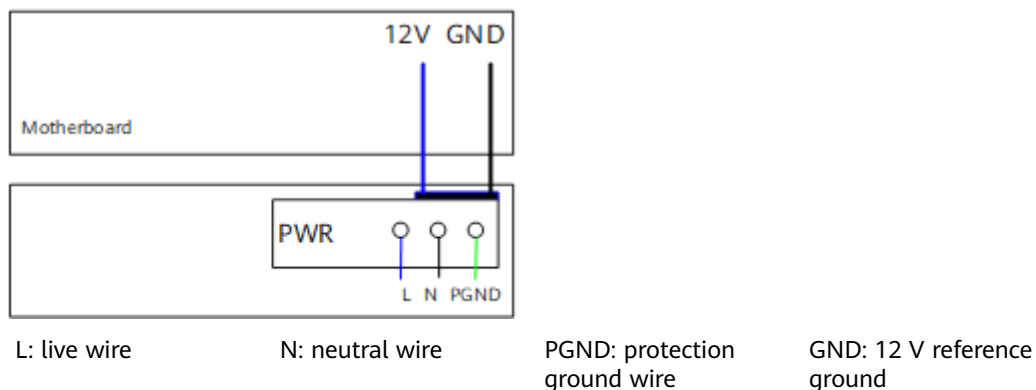
The S5720S-12TP-LI-AC has the same types of indicators as the S5720-12TP-LI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720S-12TP-LI-AC has a built-in power module and does not support pluggable power modules.

[Figure 4-131](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-131** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720S-12TP-LI-AC has no fans and uses natural heat dissipation.

## Technical Specifications

[Table 4-345](#) lists technical specifications of the S5720S-12TP-LI-AC.

**Table 4-345** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	23.8 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.8 in. x 7.1 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 250.0 mm x 186.7 mm (1.72 in. x 9.8 in. x 7.35 in.)</li> </ul>
Weight (with packaging)	1.8 kg (3.97 lb)
Stack ports	Eight 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	12.85 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	10.39 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses GE SFP optical modules with 40 km transmission distance.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010568

## 4.9.2 S5720S-12TP-PWR-LI-AC

### Version Mapping

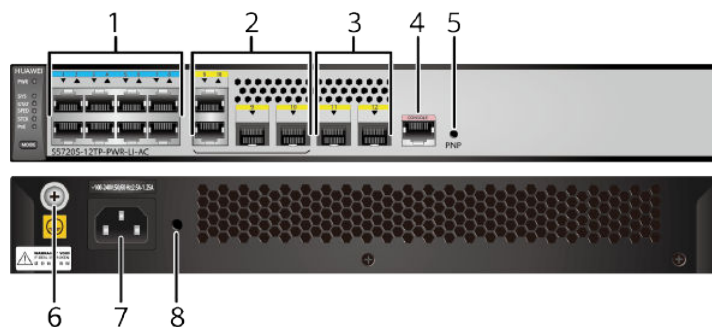
[Table 4-346](#) lists the mapping between the S5720S-12TP-PWR-LI-AC chassis and software versions.

**Table 4-346** Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-12TP-PWR-LI-AC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-132** S5720S-12TP-PWR-LI-AC appearance



1	Eight PoE+ 10/100/1000BASE-T ports	2	<p>Two combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b> (the maximum transmission distance cannot exceed 40 km)</li> </ul>
3	<p>Two 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b> (the maximum transmission distance cannot exceed 40 km)</li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only applicable to stack ports)</b></li> <li>• <b>1 m, 3 m, 5 m, 10 m SFP+ high-speed copper cables (only applicable to stack ports)</b></li> <li>• <b>3 m and 10 m AOC cables (only applicable to stack ports)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>	4	One console port



5	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <a href="#">ground cable</a>.</p>
7	<p>AC socket</p> <p><b>NOTE</b></p> <p>It is used with an <a href="#">AC power cable</a>.</p>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b></p> <p>The AC power cable locking strap is not delivered with the switch.</p>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-347](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-347** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

 NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-348](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-348** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-349](#).

**Table 4-349** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

## Indicator Description

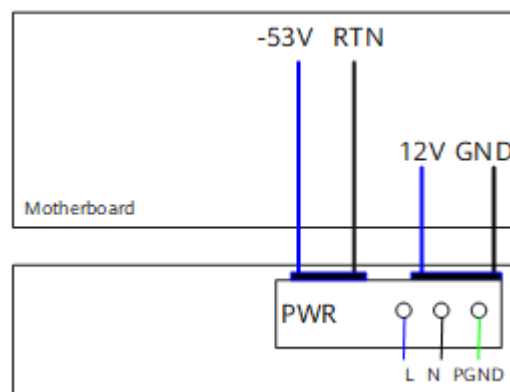
The S5720S-12TP-PWR-LI-AC has the same types of indicators as the S5720-12TP-PWR-LI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720S-12TP-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

**Figure 4-133** shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

**Figure 4-133** Power supply by a built-in AC PoE power module



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5720S-12TP-PWR-LI-AC has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-350** lists technical specifications of the S5720S-12TP-PWR-LI-AC.

**Table 4-350** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	23.8 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 320.0 mm x 220.0 mm (1.72 in. x 12.6 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 320.0 mm x 228.3 mm (1.72 in. x 12.6 in. x 8.99 in.)</li> </ul>
Weight (with packaging)	3 kg (6.62 lb)
Stack ports	Eight 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 15.61 W</li> <li>100% PoE loads: 160.5 W (system power consumption: 37.3 W, PoE: 123.2 W)</li> </ul>

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	14.57 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses GE SFP optical modules with 40 km transmission distance.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010571

### 4.9.3 S5720S-28TP-PWR-LI-ACL

#### Version Mapping

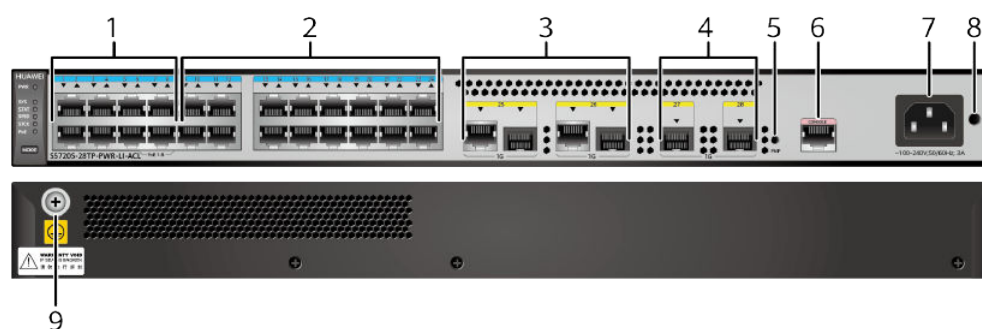
**Table 4-351** lists the mapping between the S5720S-28TP-PWR-LI-ACL chassis and software versions.

**Table 4-351** Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-28TP-PWR-LI-ACL	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-134** S5720S-28TP-PWR-LI-ACL appearance



1	Eight PoE+ 10/100/1000BASE-T ports	2	Sixteen 10/100/1000BASE-T ports
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3	<p>Two combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b> (the maximum transmission distance cannot exceed 40 km)</li> </ul>	4	<p>Two 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b> (the maximum transmission distance cannot exceed 40 km)</li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only applicable to stack ports)</b></li> <li>• <b>1 m, 3 m, 5 m, 10 m SFP+ high-speed copper cables (only applicable to stack ports)</b></li> <li>• <b>3 m and 10 m AOC cables (only applicable to stack ports)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b> If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
5	<p>One PNP button</p> <p><b>NOTICE</b> Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>One console port</p>
7	<p>AC socket</p> <p><b>NOTE</b> It is used with an <b>AC power cable</b>.</p>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>

9	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	-	-
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-352](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-352** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.



 NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

**1000BASE-X port**

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-353](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-353** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

**Console port**

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-354](#).

**Table 4-354** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

## Indicator Description

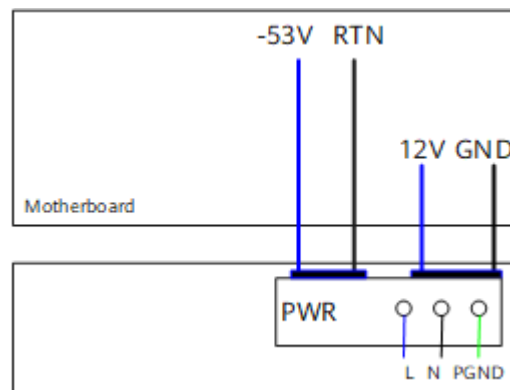
The S5720S-28TP-PWR-LI-ACL has the same types of indicators as the S5720-28TP-PWR-LI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720S-28TP-PWR-LI-ACL has a built-in power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

**Figure 4-135** shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

**Figure 4-135** Power supply by a built-in AC PoE power module



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5720S-28TP-PWR-LI-ACL has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-355** lists technical specifications of the S5720S-28TP-PWR-LI-ACL.

**Table 4-355** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	42 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)</li> </ul>
Weight (with packaging)	4.5 kg (9.92 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
Maximum power consumption (100% throughput)	<ul style="list-style-type: none"> <li>• Not providing the PoE function: 24.4 W</li> <li>• 100% PoE loads: 165.6 W (system power consumption: 42.4 W, PoE: 123.2 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	19.4 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses GE SFP optical modules with 40 km transmission distance.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010635

## 4.9.4 S5720S-28P-LI-AC

## Version Mapping

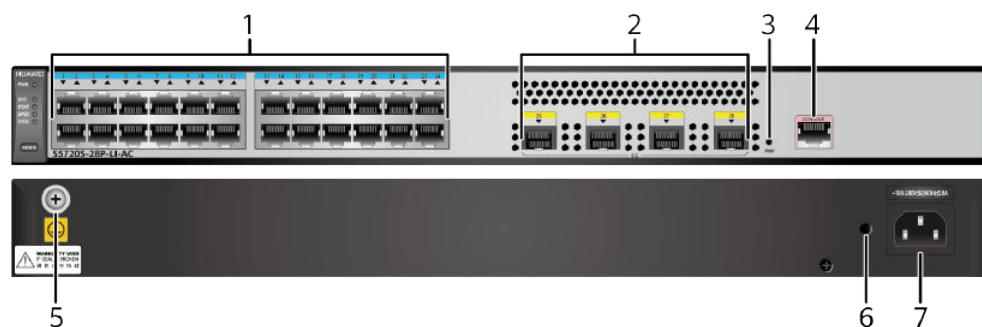
**Table 4-356** lists the mapping between the S5720S-28P-LI-AC chassis and software versions.

**Table 4-356** Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-28P-LI-AC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-136** S5720S-28P-LI-AC appearance



1	<p>Twenty-four 10/100/1000BASE-T ports</p>	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only used for stack connection)</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m AOC cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>

5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
7	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-357](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-357** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-358](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-358** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used

Attribute	Description
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-359](#).

**Table 4-359** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Indicator Description

The S5720S-28P-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC except that the S5720S-28P-LI-AC does not have an RPS, USB, or PoE mode indicator. For details, see [Indicator Description](#).

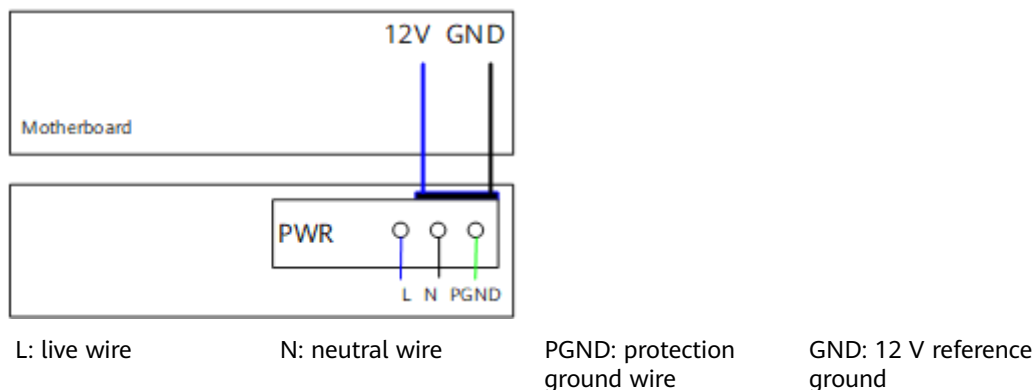
### Power Supply Configuration

The S5720S-28P-LI-AC has a built-in power module and does not support pluggable power modules.

[Figure 4-137](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.



**Figure 4-137** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720S-28P-LI-AC has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-360** lists technical specifications of the S5720S-28P-LI-AC.

**Table 4-360** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	45 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)</li> </ul>
Weight (with packaging)	3.9 kg (8.6 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	20.2 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	16.1 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses GE SFP optical modules with 40 km or longer transmission distances.

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010578

## 4.9.5 S5720SV2-28P-LI-AC

### Version Mapping

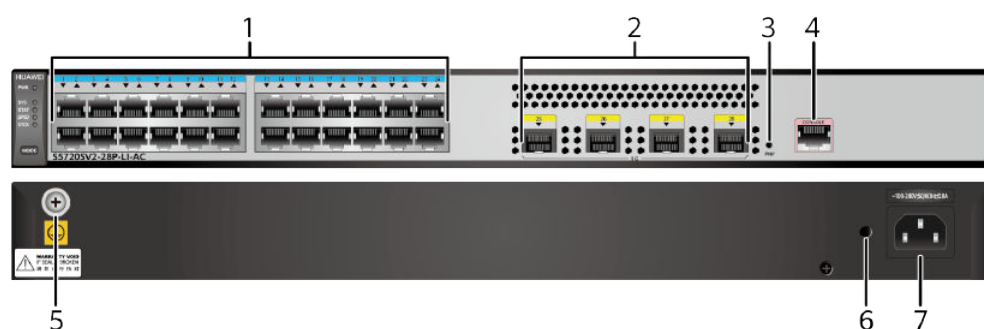
**Table 4-361** lists the mapping between the S5720SV2-28P-LI-AC chassis and software versions.

**Table 4-361** Version mapping

Series	Model	Software Version
S5720S-LI	S5720SV2-28P-LI-AC	V200R012C20 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-138** S5720SV2-28P-LI-AC appearance



1	<p>Twenty-four 10/100/1000BASE-T ports</p>	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only used for stack connection)</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m AOC cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> <li>• <b>H87MMA5671A2 GPON optical module</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>	6	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b></p> <p>The AC power cable locking strap is not delivered with the switch.</p>
7	<p>AC socket</p> <p><b>NOTE</b></p> <p>It is used with an <b>AC power cable</b>.</p>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-362](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-362** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-363](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-363** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-364](#).

**Table 4-364** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

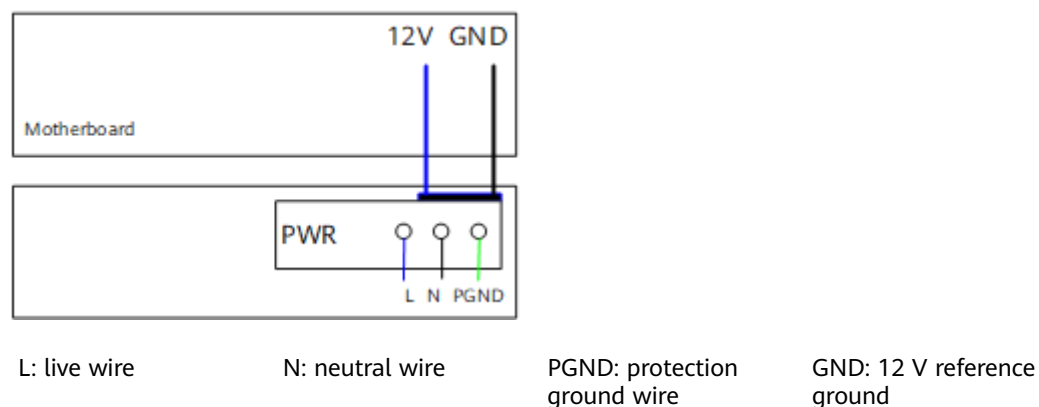
## Indicator Description

The S5720SV2-28P-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC except that the S5720SV2-28P-LI-AC does not have an RPS, USB, or PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720SV2-28P-LI-AC has a built-in power module and does not support pluggable power modules.

[Figure 4-139](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-139** Power supply mode of a built-in AC power module

## Heat Dissipation

The S5720SV2-28P-LI-AC has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-365** lists technical specifications of the S5720SV2-28P-LI-AC.

**Table 4-365** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	45 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)</li> </ul>
Weight (with packaging)	3.9 kg (8.6 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz



Item	Description
Maximum power consumption (100% throughput)	20.2 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	16.1 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses GE SFP optical modules with 40 km or longer transmission distances.
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.                     The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010852

## 4.9.6 S5720S-28P-PWR-LI-AC

### Version Mapping

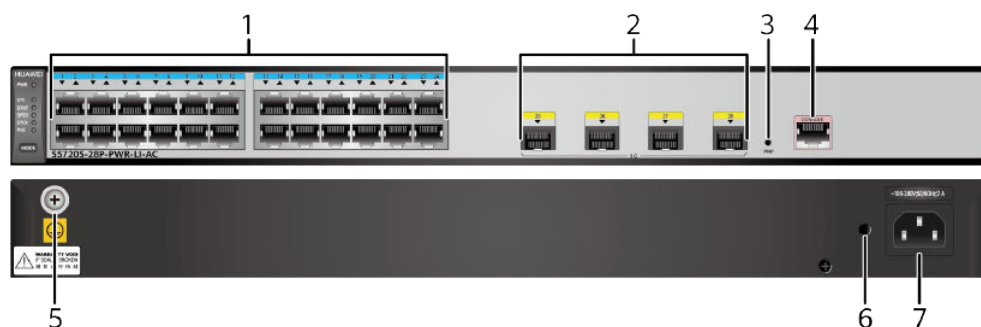
[Table 4-366](#) lists the mapping between the S5720S-28P-PWR-LI-AC chassis and software versions.

**Table 4-366** Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-28P-PWR-LI-AC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-140** S5720S-28P-PWR-LI-AC appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four 1000BASE-X ports  Applicable modules: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only used for stack connection)</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m AOC cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b> If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	One PNP button  <b>NOTICE</b> Applicable in V200R012C00 and later versions:  To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.  To reset the switch, press the button.  Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	4	One console port

5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
7	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-367](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-367** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-368](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-368** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used

Attribute	Description
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-369](#).

**Table 4-369** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Indicator Description

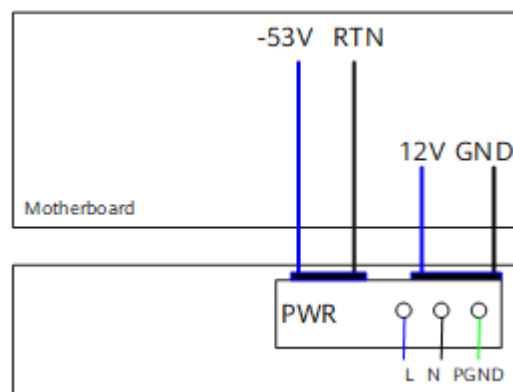
The S5720S-28P-PWR-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720S-28P-PWR-LI-AC does not have an RPS or USB indicator. For details, see [Indicator Description](#).

### Power Supply Configuration

The S5720S-28P-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

[Figure 4-141](#) shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

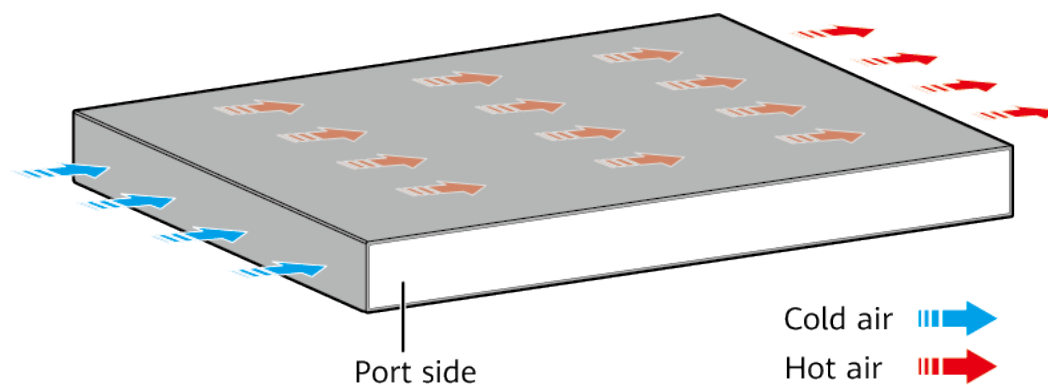
**Figure 4-141** Power supply by a built-in AC PoE power module



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5720S-28P-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-370** lists technical specifications of the S5720S-28P-PWR-LI-AC.

**Table 4-370** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.

Item	Description
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)</li> </ul>
Weight (with packaging)	5.2 kg (11.45 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 40.4 W</li> <li>100% PoE loads: 446.7 W (system power consumption: 77.1 W, PoE: 369.6 W)</li> </ul>

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	26 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)



Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010589

## 4.9.7 S5720S-52P-LI-AC

### Version Mapping

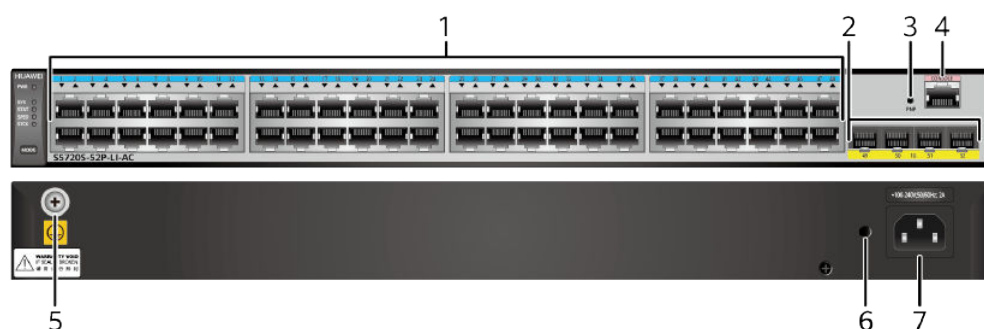
**Table 4-371** lists the mapping between the S5720S-52P-LI-AC chassis and software versions.

**Table 4-371** Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-52P-LI-AC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-142** S5720S-52P-LI-AC appearance



1	<p>Forty-eight 10/100/1000BASE-T ports</p>	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only used for stack connection)</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m AOC cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>

5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
7	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-372](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-372** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-373](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-373** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used

Attribute	Description
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-374](#).

**Table 4-374** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Indicator Description

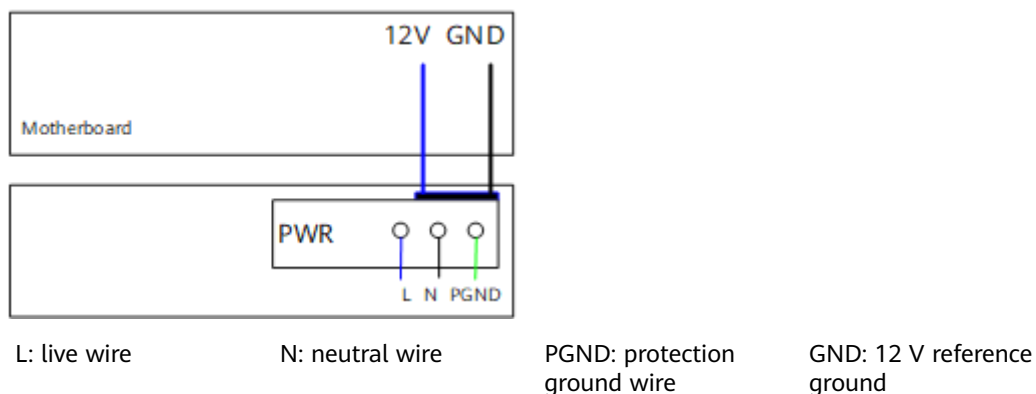
The S5720S-52P-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC except that the S5720S-52P-LI-AC does not have an RPS, USB, or PoE mode indicator. For details, see [Indicator Description](#).

### Power Supply Configuration

The S5720S-52P-LI-AC has a built-in power module and does not support pluggable power modules.

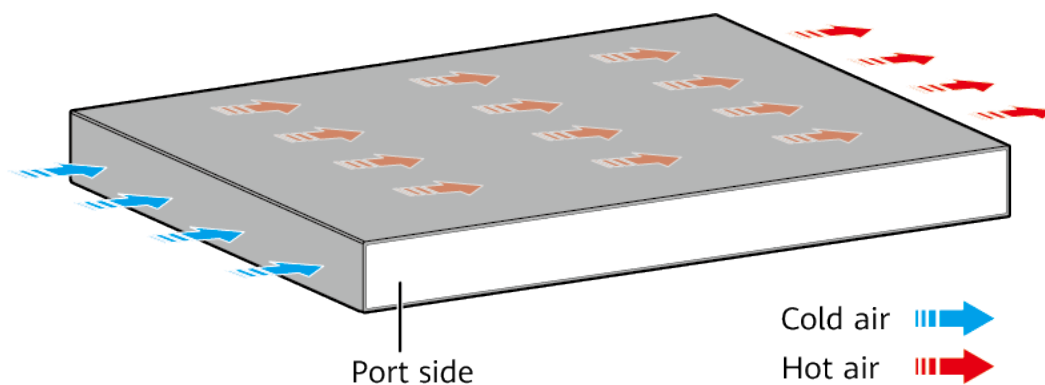
[Figure 4-143](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-143** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720S-52P-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-375** lists technical specifications of the S5720S-52P-LI-AC.

**Table 4-375** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	41 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)</li> </ul>
Weight (with packaging)	4.4 kg (9.7 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	47.3 W
Typical power consumption (30% of traffic load)	29.9 W <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>

Item	Description
Operating temperature	<p>0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 44.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010601

## 4.9.8 S5720SV2-52P-LI-AC

## Version Mapping

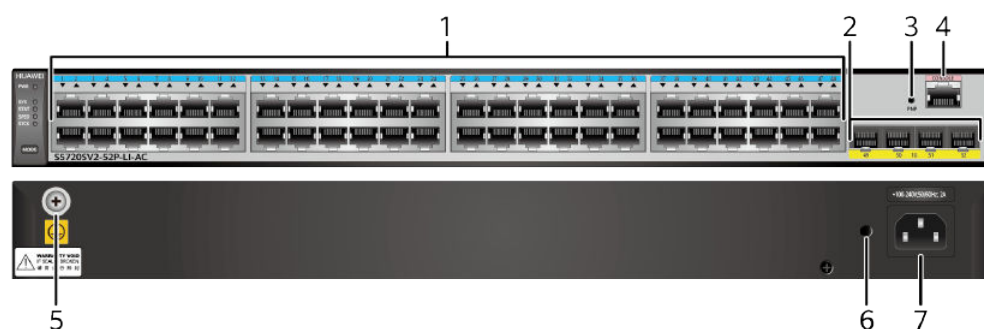
**Table 4-376** lists the mapping between the S5720SV2-52P-LI-AC chassis and software versions.

**Table 4-376** Version mapping

Series	Model	Software Version
S5720S-LI	S5720SV2-52P-LI-AC	V200R012C20 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-144** S5720SV2-52P-LI-AC appearance





1	<p>Forty-eight 10/100/1000BASE-T ports</p>	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only used for stack connection)</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m AOC cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> <li>• <b>H87MMA5671A2 GPON optical module</b></li> </ul> <p><b>NOTE</b> If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p><b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	6	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>
7	<p>AC socket</p> <p><b>NOTE</b> It is used with an <b>AC power cable</b>.</p>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-377](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-377** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-378](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-378** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-379](#).

**Table 4-379** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

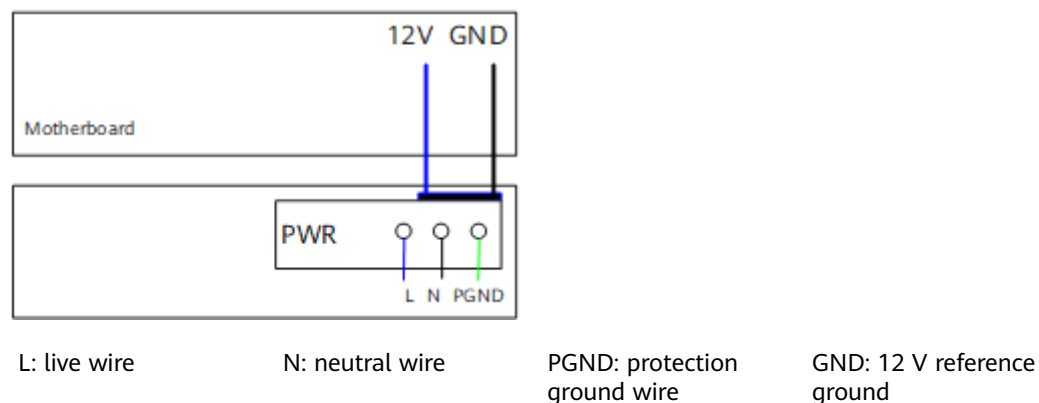
## Indicator Description

The S5720SV2-52P-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC except that the S5720SV2-52P-LI-AC does not have an RPS, USB, or PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

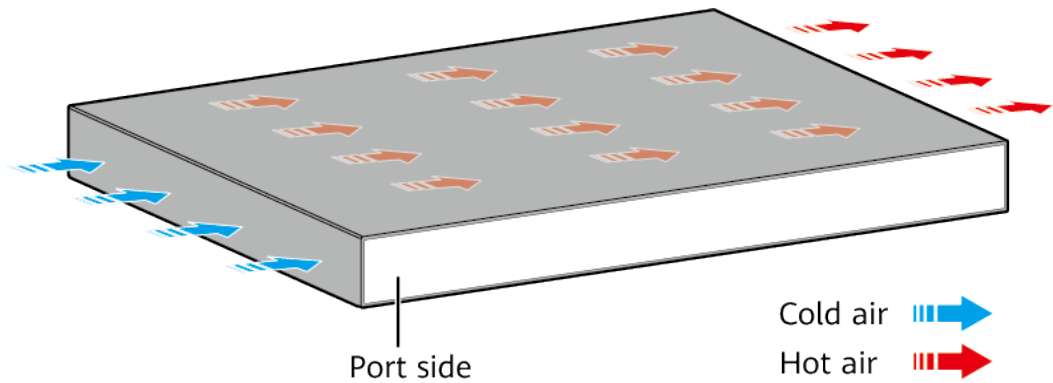
The S5720SV2-52P-LI-AC has a built-in power module and does not support pluggable power modules.

[Figure 4-145](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-145** Power supply mode of a built-in AC power module

## Heat Dissipation

The S5720SV2-52P-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-380** lists technical specifications of the S5720SV2-52P-LI-AC.

**Table 4-380** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)</li> </ul>
Weight (with packaging)	4.4 kg (9.7 lb)

Item	Description
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	47.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	29.9 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 44.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010853

## 4.9.9 S5720S-52P-PWR-LI-AC

### Version Mapping

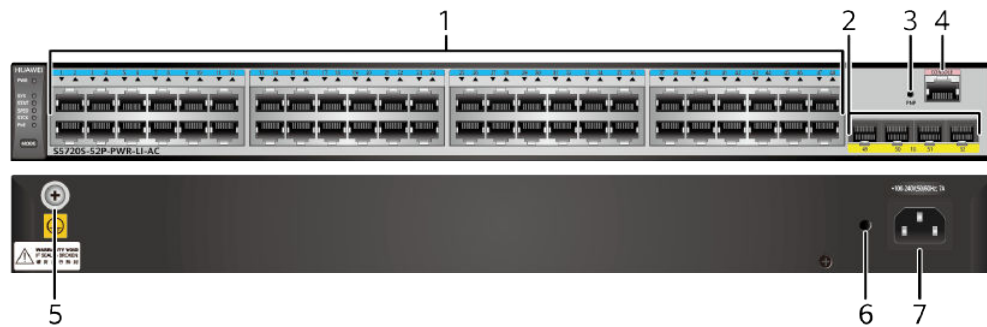
**Table 4-381** lists the mapping between the S5720S-52P-PWR-LI-AC chassis and software versions.

**Table 4-381** Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-52P-PWR-LI-AC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-146** S5720S-52P-PWR-LI-AC appearance



1	<p>Forty-eight PoE+ 10/100/1000BASE-T ports</p>	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>Stack optical module (only used for stack connection)</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m AOC cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>



5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
7	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-382](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-382** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-383](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-383** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used

Attribute	Description
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-384](#).

**Table 4-384** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Indicator Description

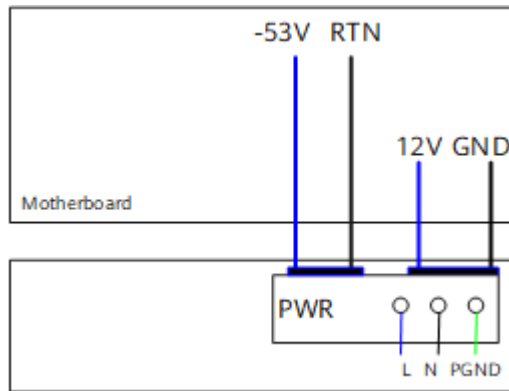
The S5720S-52P-PWR-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720S-52P-PWR-LI-AC does not have an RPS or USB indicator. For details, see [Indicator Description](#).

### Power Supply Configuration

The S5720S-52P-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

[Figure 4-147](#) shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

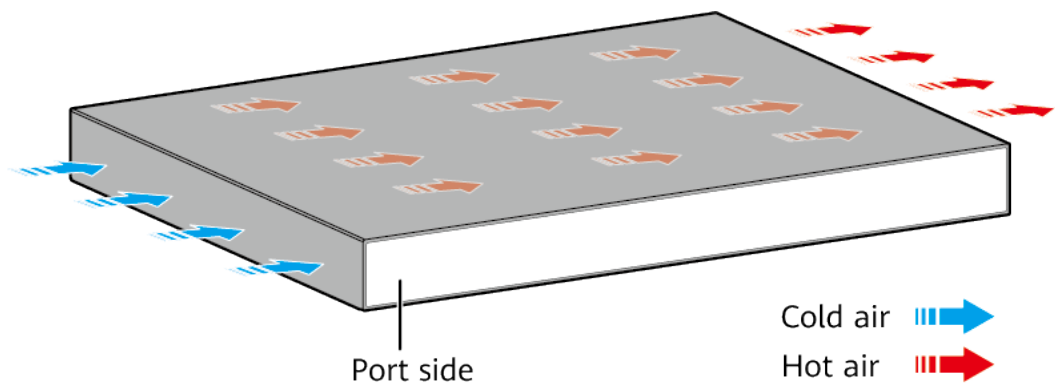
**Figure 4-147** Power supply by a built-in AC PoE power module



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5720S-52P-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-385](#) lists technical specifications of the S5720S-52P-PWR-LI-AC.

**Table 4-385** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.

Item	Description
Mean time between failures (MTBF)	38 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)</li> </ul>
Weight (with packaging)	5.6 kg (12.35 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 61.7 W</li> <li>100% PoE loads: 461.8 W (system power consumption: 92.2 W, PoE: 369.6 W)</li> </ul>

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	42 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 48.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010613

## 4.9.10 S5720S-28X-LI-AC

### Version Mapping

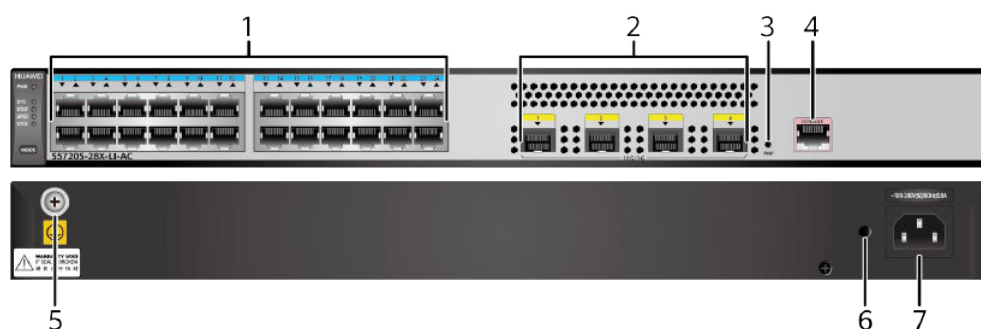
**Table 4-386** lists the mapping between the S5720S-28X-LI-AC chassis and software versions.

**Table 4-386** Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-28X-LI-AC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-148** S5720S-28X-LI-AC appearance



1	<p>Twenty-four 10/100/1000BASE-T ports</p>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>A switch can use a maximum of two 10GE optical modules with 40 km or longer transmission distances.</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>

5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
7	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-387](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-387** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-388](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-388** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae



Attribute	Description
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-389](#).

**Table 4-389** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Indicator Description

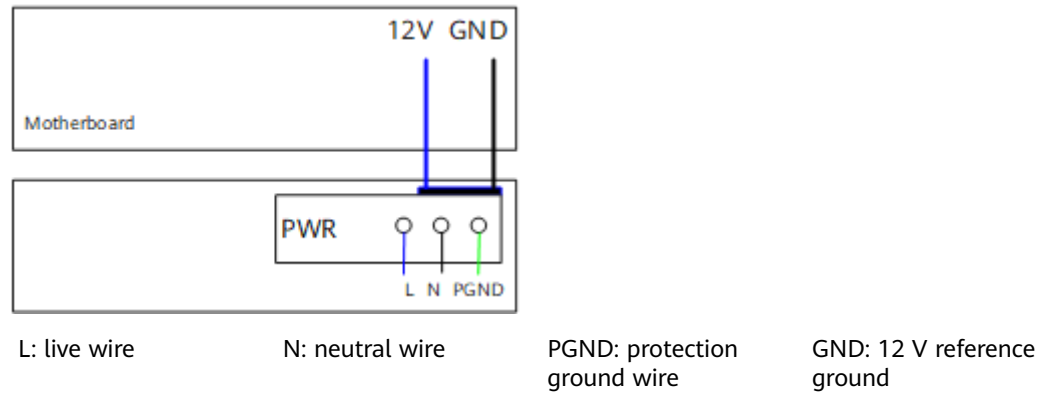
The S5720S-28X-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC except that the S5720S-28X-LI-AC does not have an RPS, USB, or PoE mode indicator. For details, see [Indicator Description](#).

### Power Supply Configuration

The S5720S-28X-LI-AC has a built-in power module and does not support pluggable power modules.

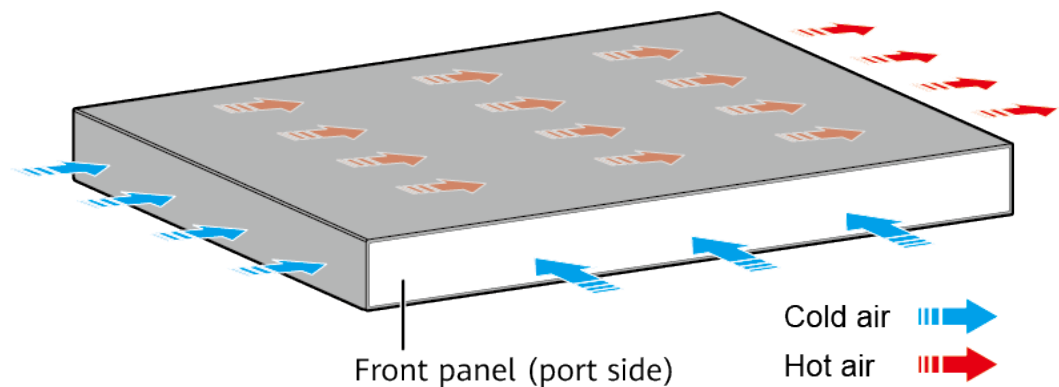
[Figure 4-149](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-149** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720S-28X-LI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-390** lists technical specifications of the S5720S-28X-LI-AC.

**Table 4-390** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	45 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)</li> </ul>
Weight (with packaging)	3.9 kg (8.6 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	29.5 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	21.4 W

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 47 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010585

### 4.9.11 S5720S-28X-LI-24S-AC

## Version Mapping

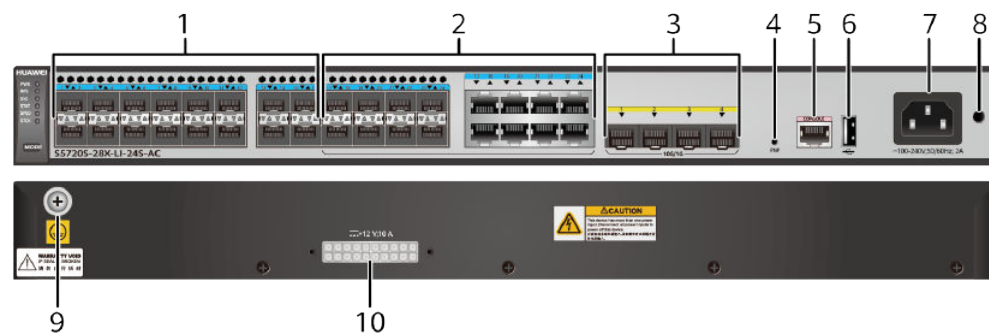
**Table 4-391** lists the mapping between the S5720S-28X-LI-24S-AC chassis and software versions.

**Table 4-391** Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-28X-LI-24S-AC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-150** S5720S-28X-LI-24S-AC appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions)</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> </ul>	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions)</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b> If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	<p>One PNP button</p> <p><b>NOTICE</b> Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	One USB port
7	<p>AC socket</p> <p><b>NOTE</b> It is used with an <b>AC power cable</b>.</p>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>
9	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	10	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <b>RPS cable</b>, which is not hot swappable.</p>

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-392](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-392** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-393](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-393** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-394](#).

**Table 4-394** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720S-28X-LI-24S-AC has the same types of indicators as the S5720-28X-LI-24S-AC. For details, see [Indicator Description](#).

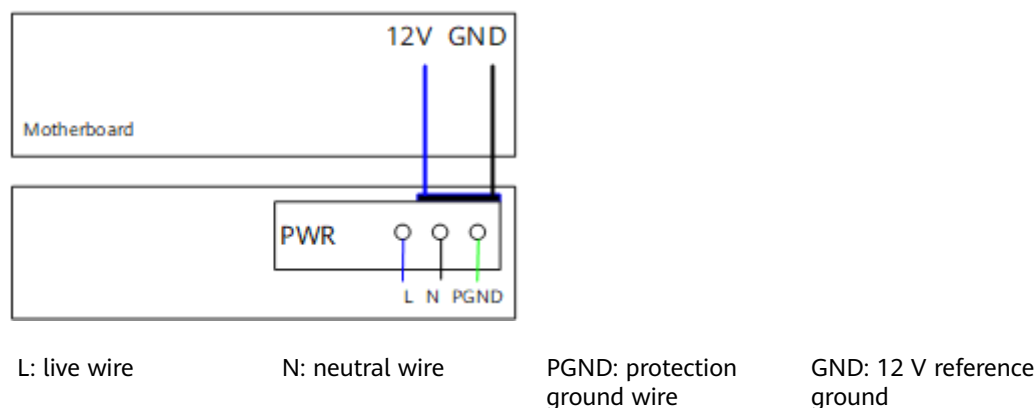


## Power Supply Configuration

The S5720S-28X-LI-24S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

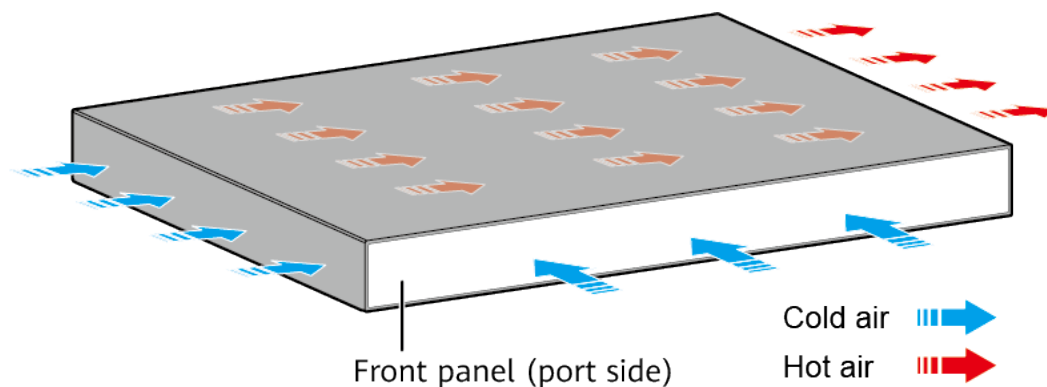
**Figure 4-151** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-151** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720S-28X-LI-24S-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-395** lists technical specifications of the S5720S-28X-LI-24S-AC.

**Table 4-395** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)</li> </ul>
Weight (with packaging)	4.1 kg (9.04 lb)
Stack ports	GE SFP optical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	41.7 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	28.9 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 43 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010630

## 4.9.12 S5720S-28X-PWR-LI-AC

### Version Mapping

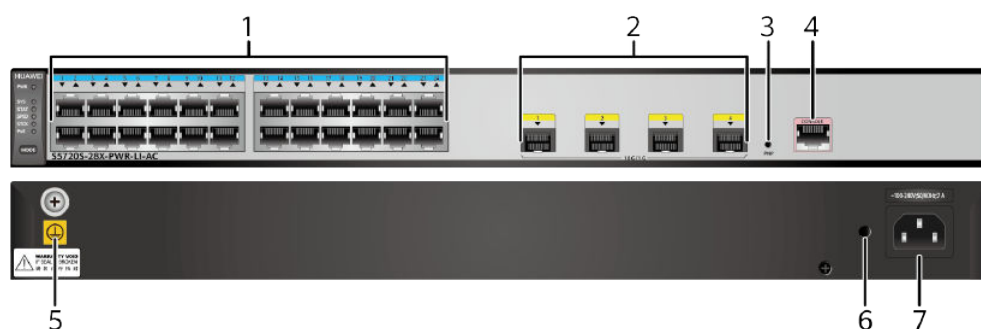
[Table 4-396](#) lists the mapping between the S5720S-28X-PWR-LI-AC chassis and software versions.

**Table 4-396** Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-28X-PWR-LI-AC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-152** S5720S-28X-PWR-LI-AC appearance



1	<p>Twenty-four PoE + 10/100/1000BASE-T ports</p>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>	6	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b></p> <p>The AC power cable locking strap is not delivered with the switch.</p>

7	AC socket  <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-397](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-397** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-398](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-398** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 4-399](#).

**Table 4-399** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

## Indicator Description

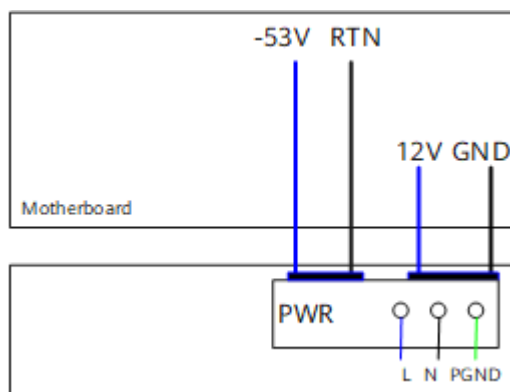
The S5720S-28X-PWR-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720S-28X-PWR-LI-AC does not have an RPS or USB indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720S-28X-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

[Figure 4-153](#) shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

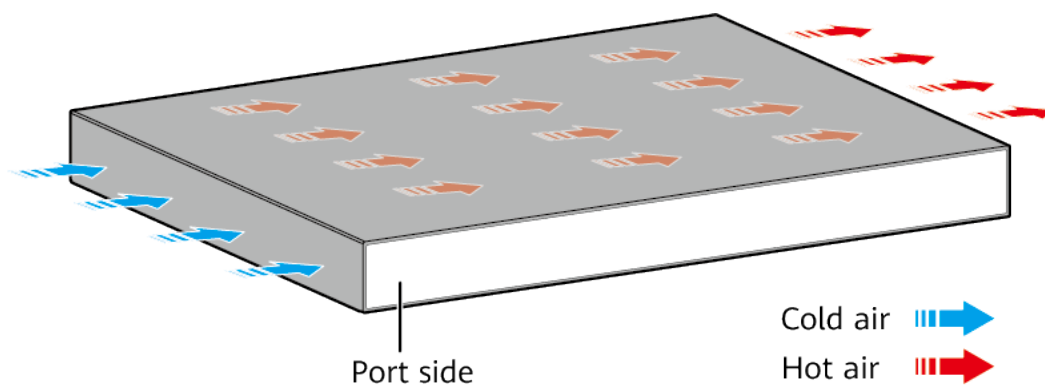
**Figure 4-153** Power supply by a built-in AC PoE power module



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5720S-28X-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-400** lists technical specifications of the S5720S-28X-PWR-LI-AC.

**Table 4-400** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.



Item	Description
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"><li>• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.)</li><li>• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)</li></ul>
Weight (with packaging)	5.2 kg (11.45 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"><li>• Not providing the PoE function: 42.7 W</li><li>• 100% PoE loads: 448.5 W (system power consumption: 78.9 W, PoE: 369.6 W)</li></ul>

Item	Description
<p>Typical power consumption (30% of traffic load)</p> <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	<p>29.5 W</p>
<p>Operating temperature</p>	<p>0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b>  When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
<p>Short-term operating temperature</p>	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b>  When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
<p>Storage temperature</p>	<p>-40°C to +70°C (-40°F to +158°F)</p>
<p>Noise under normal temperature (27°C, sound power)</p>	<p>&lt; 49.1 dB(A)</p>
<p>Relative humidity</p>	<p>5% to 95%, noncondensing</p>

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010597

### 4.9.13 S5720S-52X-LI-AC

#### Version Mapping

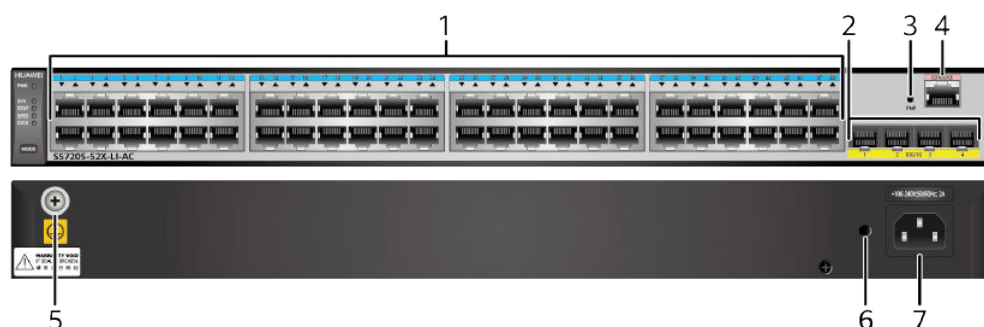
**Table 4-401** lists the mapping between the S5720S-52X-LI-AC chassis and software versions.

**Table 4-401** Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-52X-LI-AC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

#### Appearance and Structure

**Figure 4-154** S5720S-52X-LI-AC appearance



1	<p>Forty-eight 10/100/1000BASE-T ports</p>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>	6	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b></p> <p>The AC power cable locking strap is not delivered with the switch.</p>

7	AC socket  <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-402](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-402** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-403](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-403** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 4-404](#).

**Table 4-404** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

## Indicator Description

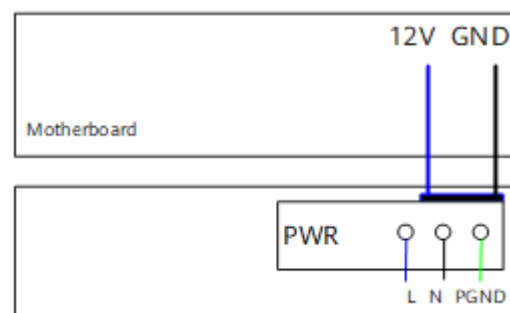
The S5720S-52X-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC except that the S5720S-52X-LI-AC does not have an RPS, USB, or PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720S-52X-LI-AC has a built-in power module and does not support pluggable power modules.

[Figure 4-155](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-155** Power supply mode of a built-in AC power module



L: live wire

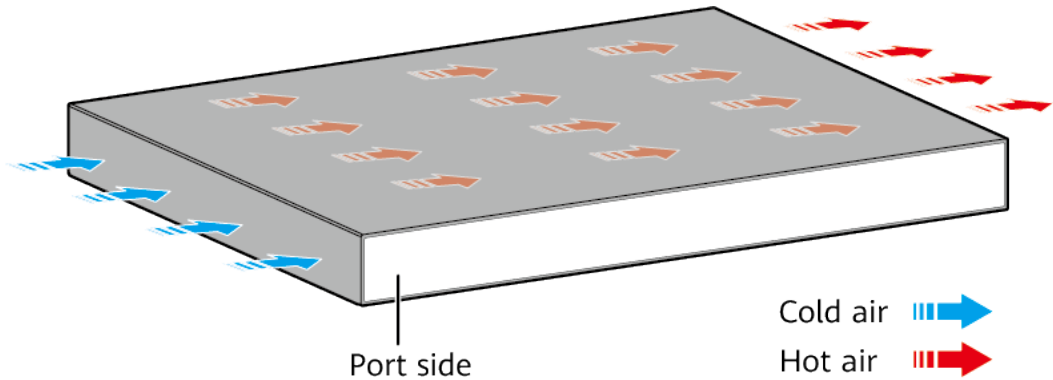
N: neutral wire

PGND: protection  
ground wire

GND: 12 V reference  
ground

## Heat Dissipation

The S5720S-52X-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-405](#) lists technical specifications of the S5720S-52X-LI-AC.

**Table 4-405** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)</li> </ul>
Weight (with packaging)	4.4 kg (9.7 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	50.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	31.6 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).



Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 44.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010604

## 4.9.14 S5720S-52X-PWR-LI-AC

### Version Mapping

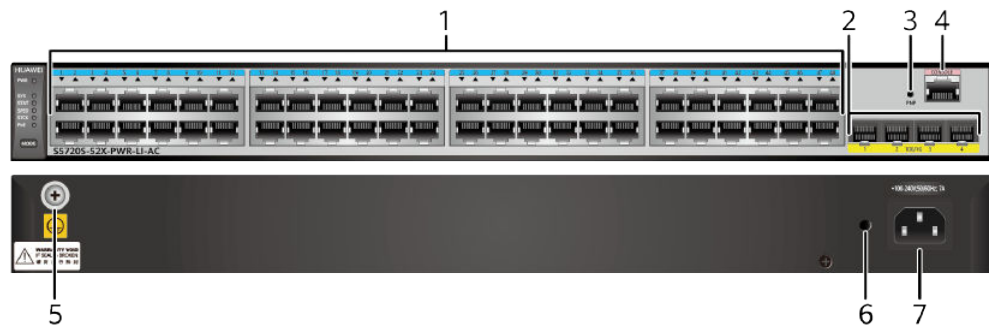
[Table 4-406](#) lists the mapping between the S5720S-52X-PWR-LI-AC chassis and software versions.

**Table 4-406** Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-52X-PWR-LI-AC	V200R010C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-156** S5720S-52X-PWR-LI-AC appearance



1	<p>Forty-eight PoE+ 10/100/1000BASE-T ports</p>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>	6	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b></p> <p>The AC power cable locking strap is not delivered with the switch.</p>

7	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-407](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-407** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-408](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-408** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 4-409](#).

**Table 4-409** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

## Indicator Description

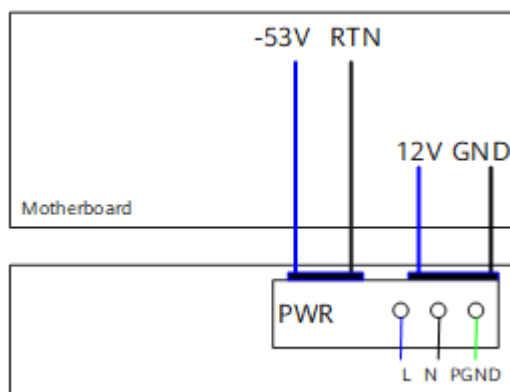
The S5720S-52X-PWR-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720S-52X-PWR-LI-AC does not have an RPS or USB indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720S-52X-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

[Figure 4-157](#) shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

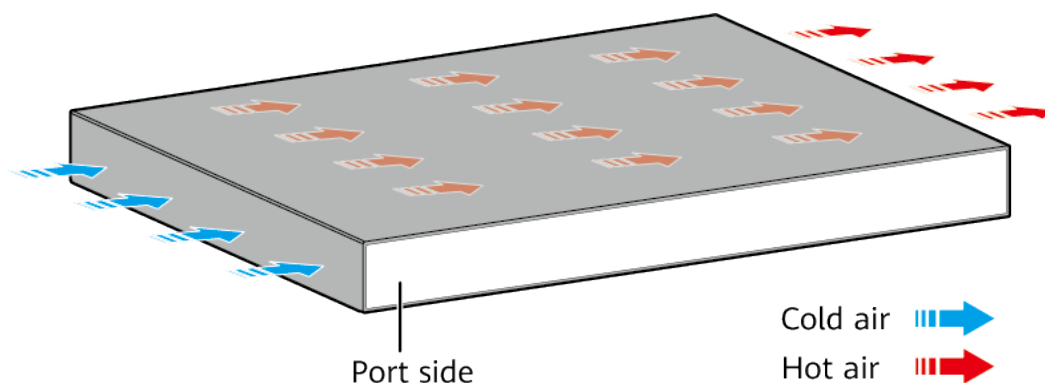
**Figure 4-157** Power supply by a built-in AC PoE power module



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5720S-52X-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-410** lists technical specifications of the S5720S-52X-PWR-LI-AC.

**Table 4-410** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.

Item	Description
Mean time between failures (MTBF)	38 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 314.8 mm (1.72 in. x 17.4 in. x 12.39 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 323.8 mm (1.72 in. x 17.4 in. x 12.75 in.)</li> </ul>
Weight (with packaging)	5.6 kg (12.35 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 63.5 W</li> <li>100% PoE loads: 464.3 W (system power consumption: 94.7 W, PoE: 369.6 W)</li> </ul>

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	42.2 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 48.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)



Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010617

## 4.10 S5700-SI

### 4.10.1 S5700-24TP-SI-AC

#### Version Mapping

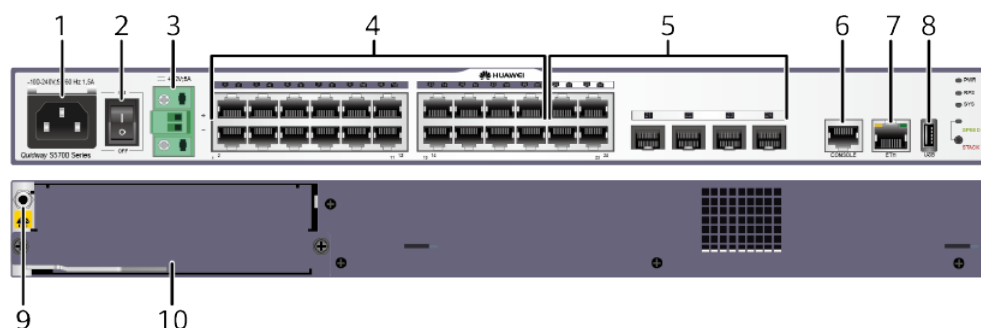
[Table 4-411](#) lists the mapping between the S5700-24TP-SI-AC chassis and software versions.

**Table 4-411** Version mapping

Series	Model	Software Version
S5700-SI	S5700-24TP-SI-AC	V100R005C01 to V200R005C02 <b>NOTE</b> This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

#### Appearance and Structure

**Figure 4-158** S5700-24TP-SI-AC appearance



1	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	2	Power switch
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3	<p>Backup power socket</p> <p><b>NOTE</b> This socket can be connected to a backup power supply unit. The backup power supply unit must provide 12 V DC output voltage (ranging from 11 V to 13 V) and a minimum power of 100 W.</p>	4	Twenty 10/100/1000BASE-T ports
5	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> </ul>	6	One console port
7	One ETH management port	8	One USB port
9	<p>ESD jack</p> <p><b>NOTE</b> Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.</p>	10	<p>Rear card slot</p> <p><b>NOTE</b> Card supported:</p> <ul style="list-style-type: none"> <li>• <b>8.30 ES5D00ETPC00 (Stack Rear Card)</b></li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-412](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-412** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one

internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-413](#).

**Table 4-413** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the

*Configuration Guide - Basic Configurations.* **Table 4-414** describes the attributes of an ETH management port.

**Table 4-414** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

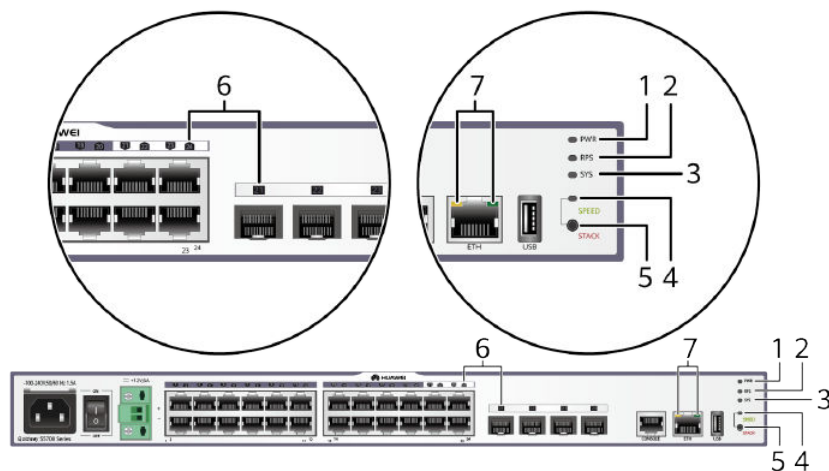
The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

**Figure 4-159** Indicators on the S5700-24TP-SI-AC



**Table 4-415** Description of indicators on the switch

Number	Indicator/ Button	Color	Description
1	PWR: power supply indicator	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the backup power.
2	RPS: backup power supply indicator	Green	<ul style="list-style-type: none"> <li>Off: No backup power is connected to the switch or the backup power is faulty.</li> <li>Steady on: The backup power is connected to the switch.</li> </ul>
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> <li>Steady on: The system is not operating properly or is starting.</li> <li>Slow blinking: The system is running normally.</li> <li>Fast blinking: The system is copying the system software and configuration file from a USB flash drive.</li> </ul>
		Yellow	<ul style="list-style-type: none"> <li>Steady on: The system is performing self-check during startup.</li> <li>Blinking: The system has been successfully upgraded using a USB flash drive and the switch has restarted. You can remove the USB flash drive from the switch.</li> </ul>
		Red	<ul style="list-style-type: none"> <li>Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.</li> <li>Blinking: The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.</li> </ul>

Number	Indicator/Button	Color	Description
4	Mode indicator	-	Off: The service port indicators are in the status mode (default). In the status mode, the service port indicator shows the port link or activity state.
		Green	Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
		Red	Steady on: The service port indicators show the stack ID of the switch. After 45 seconds, the service port indicators automatically restore to the status mode.
5	Mode switch button	-	<ul style="list-style-type: none"> <li>When you press this button once, the mode indicator turns green and the service port indicators show the speed of each service port.</li> <li>When you press this button a second time, the mode indicator turns red and the service port indicators show the stack status.</li> <li>When you press this button a third time, the mode indicator turns off.</li> </ul> <p>If you do not press the button within 45 seconds, the mode indicator restores to status mode.</p>
6	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-416</a> .	
7	ETH indicator	-	Off: No link is established on the port.
		Green	Steady on: The port is connected.
		Yellow	Blinking: The port is sending or receiving data.

**Table 4-416** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5700-24TP-SI-AC has a built-in power module and can connect to an external DC power supply for power redundancy.

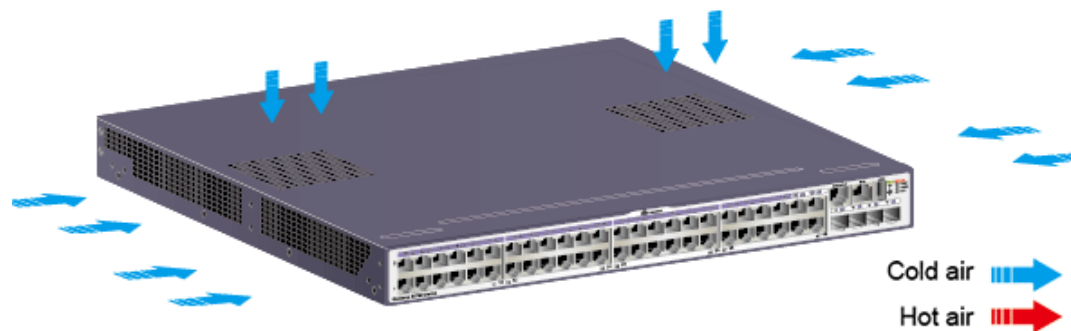
## Heat Dissipation

### NOTE

The fans can work in the intelligent mode or forcible mode:

- In the intelligent mode, the fans start to operate only when the ambient temperature goes higher than a specified value. In V200R003C00 and later versions, you can run the **display fan speed-adjust threshold minus** command on the switches that use the intelligent heat dissipation mode to view the temperature thresholds for the fans to start and stop running. The **set fan speed-adjust threshold minus** command can be used to lower these temperature thresholds.
- In the forcible mode, the fans operate immediately when the switch starts. You can run the **display fan speed-adjust threshold minus** on the switches that support intelligent fan speed adjustment to view the temperature thresholds for the fans to increase and decrease rotating speeds. The **set fan speed-adjust threshold minus** command can lower these temperature thresholds.

The S5700-24TP-SI-AC has a built-in fan for intelligent air cooling. Air flows in from the left, right, and top sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-417](#) lists technical specifications of the S5700-24TP-SI-AC.

**Table 4-417** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	37 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999



Item	Description
Service port surge protection	±2 kV in common mode
Power supply surge protection	±6 kV in differential mode, ±6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight	<ul style="list-style-type: none"> <li>• Empty: ≤ 5 kg (11.02 lb)</li> <li>• Fully configured: ≤ 8.5 kg (18.74 lb)</li> </ul>
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	40 W
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Silent
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02352360

## 4.10.2 S5700-24TP-SI-DC

### Version Mapping

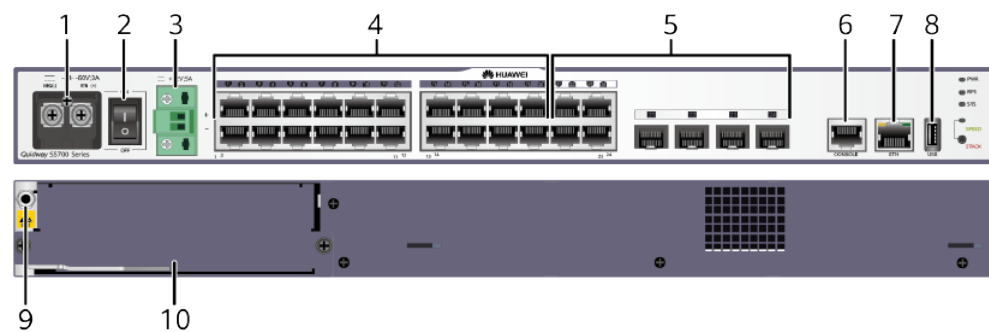
**Table 4-418** lists the mapping between the S5700-24TP-SI-DC chassis and software versions.

**Table 4-418** Version mapping

Series	Model	Software Version
S5700-SI	S5700-24TP-SI-DC	V100R005C01 to V200R005C02 <b>NOTE</b> This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

### Appearance and Structure

**Figure 4-160** S5700-24TP-SI-DC appearance



1	DC power terminal <b>NOTE</b> It is used together with a <a href="#">DC Power Cable</a> .	2	Power switch
3	Backup power socket <b>NOTE</b> This socket can be connected to a backup power supply unit. The backup power supply unit must provide 12 V DC output voltage (ranging from 11 V to 13 V) and a minimum power of 100 W.	4	Twenty 10/100/1000BASE-T ports

5	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> </ul>	6	One console port
7	One ETH management port	8	One USB port
9	ESD jack <b>NOTE</b> Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	10	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <b>8.30 ES5D00ETPC00 (Stack Rear Card)</b></li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-419](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-419** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-420](#).

**Table 4-420** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 4-421](#) describes the attributes of an ETH management port.

**Table 4-421** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

### Indicator Description

The S5700-24TP-SI-DC has the same types of indicators as the S5700-24TP-SI-AC. For details, see [Indicator Description](#).

### Power Supply Configuration

The S5700-24TP-SI-DC has a built-in power module and can connect to an external DC power supply for power redundancy.

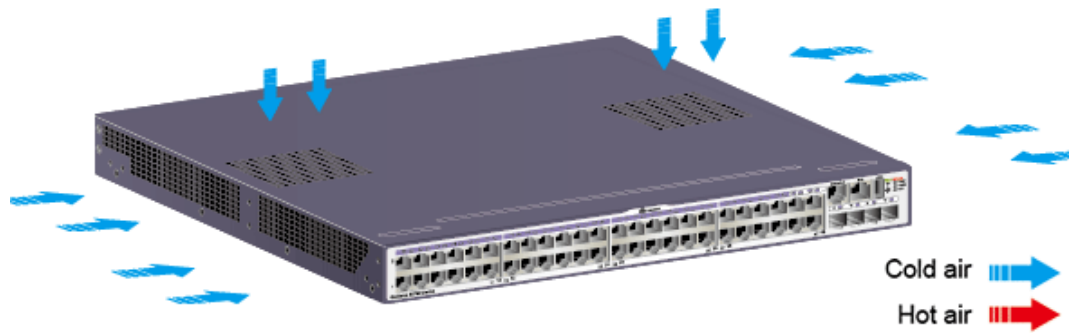
### Heat Dissipation

#### NOTE

The fans can work in the intelligent mode or forcible mode:

- In the intelligent mode, the fans start to operate only when the ambient temperature goes higher than a specified value. In V200R003C00 and later versions, you can run the **display fan speed-adjust threshold minus** command on the switches that use the intelligent heat dissipation mode to view the temperature thresholds for the fans to start and stop running. The **set fan speed-adjust threshold minus** command can be used to lower these temperature thresholds.
- In the forcible mode, the fans operate immediately when the switch starts. You can run the **display fan speed-adjust threshold minus** on the switches that support intelligent fan speed adjustment to view the temperature thresholds for the fans to increase and decrease rotating speeds. The **set fan speed-adjust threshold minus** command can lower these temperature thresholds.

The S5700-24TP-SI-DC has a built-in fan for intelligent air cooling. Air flows in from the left, right, and top sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-422** lists technical specifications of the S5700-24TP-SI-DC.

**Table 4-422** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	37 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±2 kV in common mode
Power supply surge protection	±1 kV in differential mode, ±2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight	<ul style="list-style-type: none"> <li>Empty: ≤ 5 kg (11.02 lb)</li> <li>Fully configured: ≤ 8.5 kg (18.74 lb)</li> </ul>
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC

Item	Description
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	40 W
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Silent
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02352343

### 4.10.3 S5700-24TP-PWR-SI

#### Version Mapping

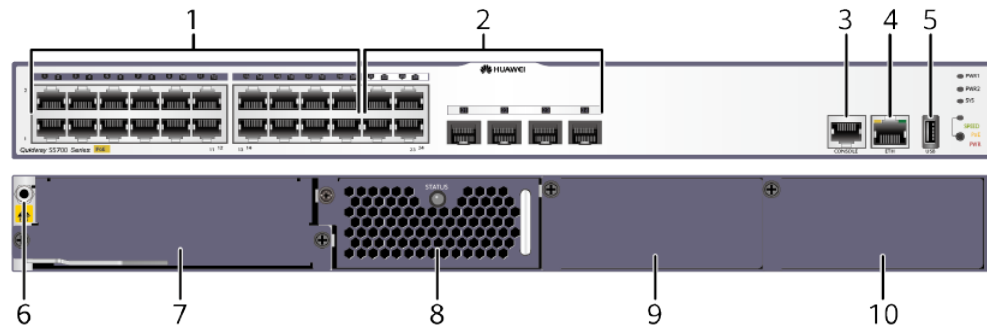
**Table 4-423** lists the mapping between the S5700-24TP-PWR-SI chassis and software versions.

**Table 4-423** Version mapping

Series	Model	Software Version
S5700-SI	S5700-24TP-PWR-SI	V100R005C01 to V200R005C02 <b>NOTE</b> This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

## Appearance and Structure

Figure 4-161 S5700-24TP-PWR-SI appearance



1	Twenty PoE+ 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• FE optical module</li> <li>• GE optical module</li> <li>• GE-CWDM optical module</li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	ESD jack  <b>NOTE</b> Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.
7	Rear card slot  <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• 8.30 ES5D00ETPC00 (Stack Rear Card)</li> </ul>	8	Fan slot  <b>NOTE</b> Applicable fan module: <ul style="list-style-type: none"> <li>• CX7E1FANA fan module</li> </ul>
9	Power module slot 2  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• 250 W AC PoE power module</li> <li>• 500 W AC PoE power module</li> </ul>	10	Power module slot 1  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• 250 W AC PoE power module</li> <li>• 500 W AC PoE power module</li> </ul>

## Port Description

### 10/100/1000BASE-T port



A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-424](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-424** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-425](#).

**Table 4-425** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. **Table 4-426** describes the attributes of an ETH management port.

**Table 4-426** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5700-24TP-PWR-SI has the same types of indicators as the S5700-28C-PWR-SI. For details, see [Indicator Description](#).

## Power Supply Configuration

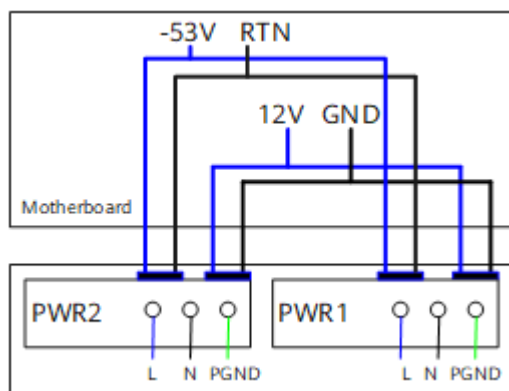
The S5700-24TP-PWR-SI has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). [Table 4-427](#) lists its power supply configurations.

**Table 4-427** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	–	123.2 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 8</li><li>802.3at (30 W per port): 4</li></ul>
500 W	–	369.6 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 24</li><li>802.3at (30 W per port): 12</li></ul>
250 W	250 W	246.4 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 16</li><li>802.3at (30 W per port): 8</li></ul>
500 W	500 W	369.6 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 24</li><li>802.3at (30 W per port): 12</li></ul>

[Figure 4-162](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

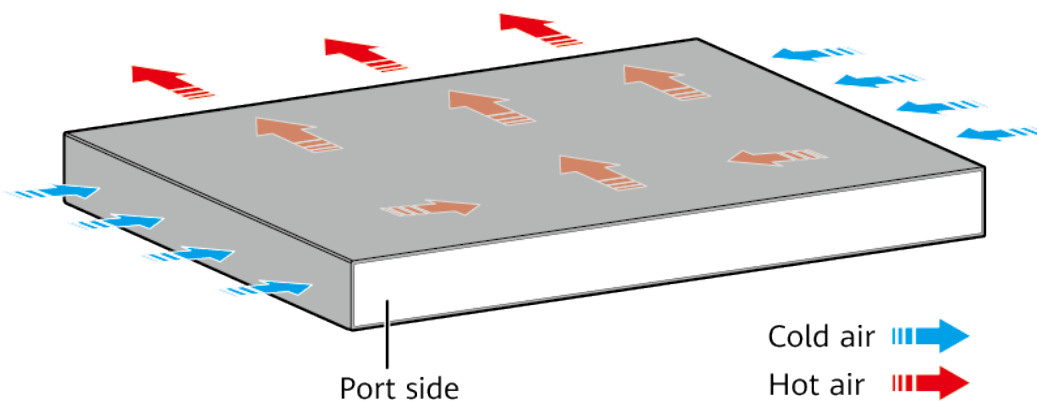
**Figure 4-162** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5700-24TP-PWR-SI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-428** lists technical specifications of the S5700-24TP-PWR-SI.

**Table 4-428** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB

Item	Description
Mean time between failures (MTBF)	84.3 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±1 kV in common mode
Power supply surge protection	±2 kV in differential mode, ±4 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> <li>• Empty: ≤ 5 kg (11.02 lb)</li> <li>• Fully configured: ≤ 8.5 kg (18.74 lb)</li> </ul>
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	455 W (system power consumption: 85 W, PoE: 370 W)
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02352369

## 4.10.4 S5700-48TP-SI-AC

### Version Mapping

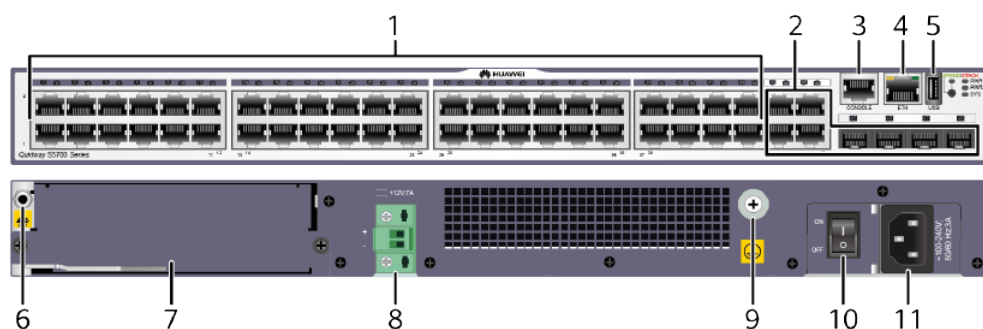
**Table 4-429** lists the mapping between the S5700-48TP-SI-AC chassis and software versions.

**Table 4-429** Version mapping

Series	Model	Software Version
S5700-SI	S5700-48TP-SI-AC	V100R005C01 to V200R005C02 <b>NOTE</b> This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

### Appearance and Structure

**Figure 4-163** S5700-48TP-SI-AC appearance



1	Forty-four 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	ESD jack <b>NOTE</b> Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.
7	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <b>8.30 ES5D00ETPC00 (Stack Rear Card)</b></li> </ul>	8	Backup power socket <b>NOTE</b> This socket can be connected to a backup power supply unit. The backup power supply unit must provide 12 V DC output voltage (ranging from 11 V to 13 V) and a minimum power of 100 W.
9	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	10	Power switch
11	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 4-430** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-430** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-431](#).

**Table 4-431** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)



Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. **Table 4-432** describes the attributes of an ETH management port.

**Table 4-432** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5700-48TP-SI-AC has the same types of indicators as the S5700-24TP-SI-AC. For details, see **Indicator Description**.

## Power Supply Configuration

The S5700-48TP-SI-AC has a built-in power module and can connect to an external DC power supply for power redundancy.

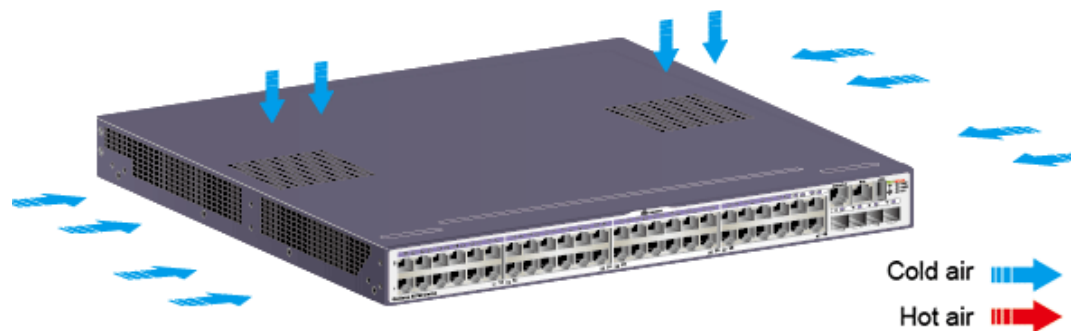
## Heat Dissipation

### NOTE

The fans can work in the intelligent mode or forcible mode:

- In the intelligent mode, the fans start to operate only when the ambient temperature goes higher than a specified value. In V200R003C00 and later versions, you can run the **display fan speed-adjust threshold minus** command on the switches that use the intelligent heat dissipation mode to view the temperature thresholds for the fans to start and stop running. The **set fan speed-adjust threshold minus** command can be used to lower these temperature thresholds.
- In the forcible mode, the fans operate immediately when the switch starts. You can run the **display fan speed-adjust threshold minus** on the switches that support intelligent fan speed adjustment to view the temperature thresholds for the fans to increase and decrease rotating speeds. The **set fan speed-adjust threshold minus** command can lower these temperature thresholds.

The S5700-48TP-SI-AC has two built-in fans for intelligent air cooling. Air flows in from the left, right, and top sides, and exhausts from the rear panel.



## Technical Specifications

[Table 4-433](#) lists technical specifications of the S5700-48TP-SI-AC.

**Table 4-433** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	34 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: $\pm 2$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> <li>• Empty: <math>\leq 5</math> kg (11.02 lb)</li> <li>• Fully configured: <math>\leq 8.5</math> kg (18.74 lb)</li> </ul>
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	64 W
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Silent
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02352353

## 4.10.5 S5700-48TP-SI-DC

### Version Mapping

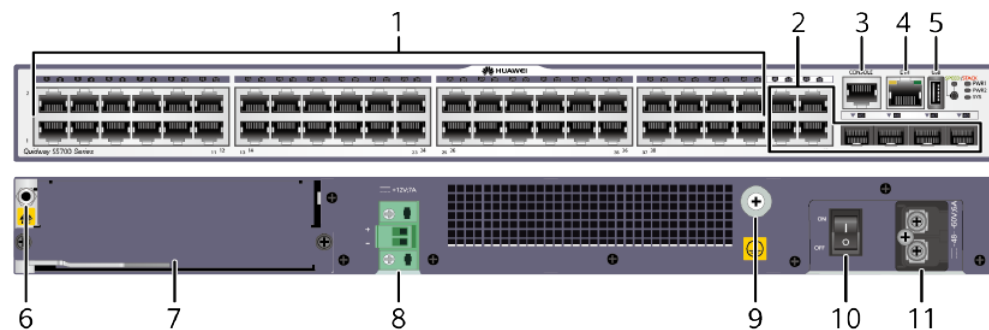
**Table 4-434** lists the mapping between the S5700-48TP-SI-DC chassis and software versions.

**Table 4-434** Version mapping

Series	Model	Software Version
S5700-SI	S5700-48TP-SI-DC	V100R005C01 to V200R005C02 <b>NOTE</b> This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

### Appearance and Structure

**Figure 4-164** S5700-48TP-SI-DC appearance



1	Forty-four 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> </ul>
3	One console port	4	One ETH management port

5	One USB port	6	ESD jack <b>NOTE</b> Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.
7	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>8.30 ES5D00ETPC00 (Stack Rear Card)</li> </ul>	8	Backup power socket <b>NOTE</b> This socket can be connected to a backup power supply unit. The backup power supply unit must provide 12 V DC output voltage (ranging from 11 V to 13 V) and a minimum power of 100 W.
9	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	10	Power switch
11	DC power terminal <b>NOTE</b> It is used together with a <a href="#">DC Power Cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-435](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-435** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-436](#).

**Table 4-436** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 4-437](#) describes the attributes of an ETH management port.

**Table 4-437** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

### Indicator Description

The S5700-48TP-SI-DC has the same types of indicators as the S5700-24TP-SI-AC. For details, see [Indicator Description](#).

### Power Supply Configuration

The S5700-48TP-SI-DC has a built-in power module and can connect to an external DC power supply for power redundancy.

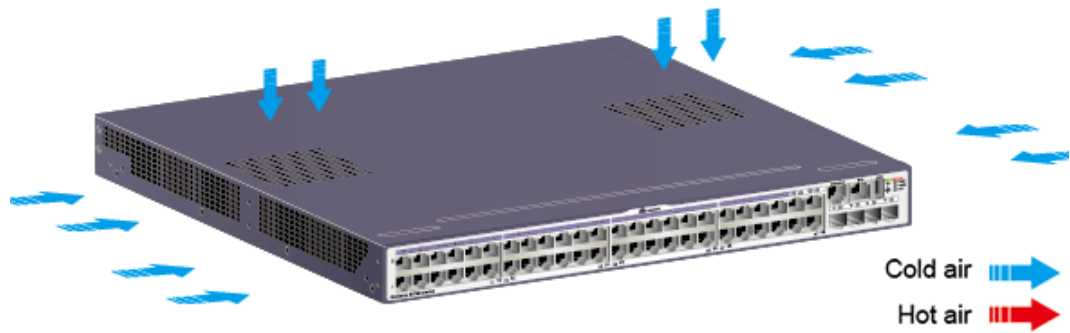
### Heat Dissipation

#### NOTE

The fans can work in the intelligent mode or forcible mode:

- In the intelligent mode, the fans start to operate only when the ambient temperature goes higher than a specified value. In V200R003C00 and later versions, you can run the **display fan speed-adjust threshold minus** command on the switches that use the intelligent heat dissipation mode to view the temperature thresholds for the fans to start and stop running. The **set fan speed-adjust threshold minus** command can be used to lower these temperature thresholds.
- In the forcible mode, the fans operate immediately when the switch starts. You can run the **display fan speed-adjust threshold minus** on the switches that support intelligent fan speed adjustment to view the temperature thresholds for the fans to increase and decrease rotating speeds. The **set fan speed-adjust threshold minus** command can lower these temperature thresholds.

The S5700-48TP-SI-DC has two built-in fans for intelligent air cooling. Air flows in from the left, right, and top sides, and exhausts from the rear panel.



## Technical Specifications

**Table 4-438** lists technical specifications of the S5700-48TP-SI-DC.

**Table 4-438** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	34 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 2$ kV
Power supply surge protection	$\pm 1$ kV in differential mode, $\pm 2$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> <li>Empty: <math>\leq 5</math> kg (11.02 lb)</li> <li>Fully configured: <math>\leq 8.5</math> kg (18.74 lb)</li> </ul>
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC



Item	Description
Maximum power consumption (100% throughput, full speed of fans)	64 W
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Silent
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02352357

## 4.10.6 S5700-48TP-PWR-SI

### Version Mapping

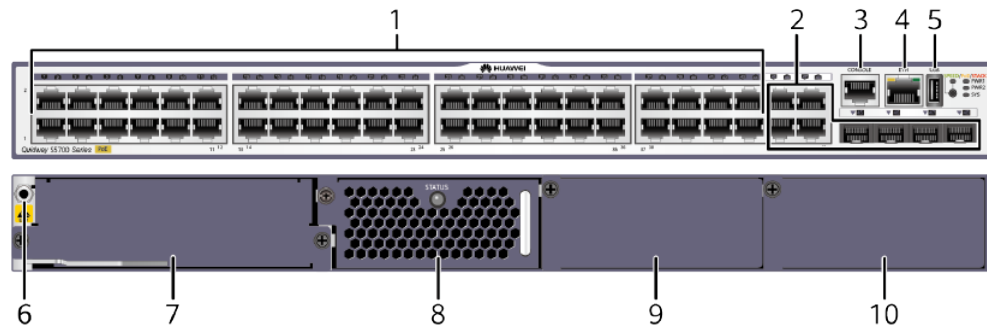
**Table 4-439** lists the mapping between the S5700-48TP-PWR-SI chassis and software versions.

**Table 4-439** Version mapping

Series	Model	Software Version
S5700-SI	S5700-48TP-PWR-SI	V100R005C01 to V200R005C02 <b>NOTE</b> This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

## Appearance and Structure

Figure 4-165 S5700-48TP-PWR-SI appearance



1	Forty-four PoE+ 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	ESD jack <b>NOTE</b> Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.
7	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <b>8.30 ES5D00ETPC00 (Stack Rear Card)</b></li> </ul>	8	Fan slot <b>NOTE</b> Applicable fan module: <ul style="list-style-type: none"> <li>• <b>CX7E1FANA fan module</b></li> </ul>
9	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <b>250 W AC PoE power module</b></li> <li>• <b>500 W AC PoE power module</b></li> </ul>	10	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <b>250 W AC PoE power module</b></li> <li>• <b>500 W AC PoE power module</b></li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-440](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-440** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-441](#).

**Table 4-441** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. **Table 4-442** describes the attributes of an ETH management port.

**Table 4-442** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5700-48TP-PWR-SI has the same types of indicators as the S5700-28C-PWR-SI. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5700-48TP-PWR-SI has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). [Table 4-443](#) lists its power supply configurations.

**Table 4-443** Power supply configurations

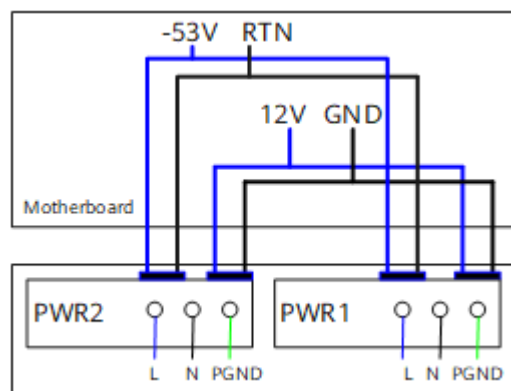
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	–	123.2 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 8</li><li>802.3at (30 W per port): 4</li></ul>
500 W	–	369.6 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 24</li><li>802.3at (30 W per port): 12</li></ul>
250 W	250 W	246.4 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 16</li><li>802.3at (30 W per port): 8</li></ul>
500 W	500 W	739.2 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 48</li><li>802.3at (30 W per port): 24</li></ul>

### NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 4-166](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

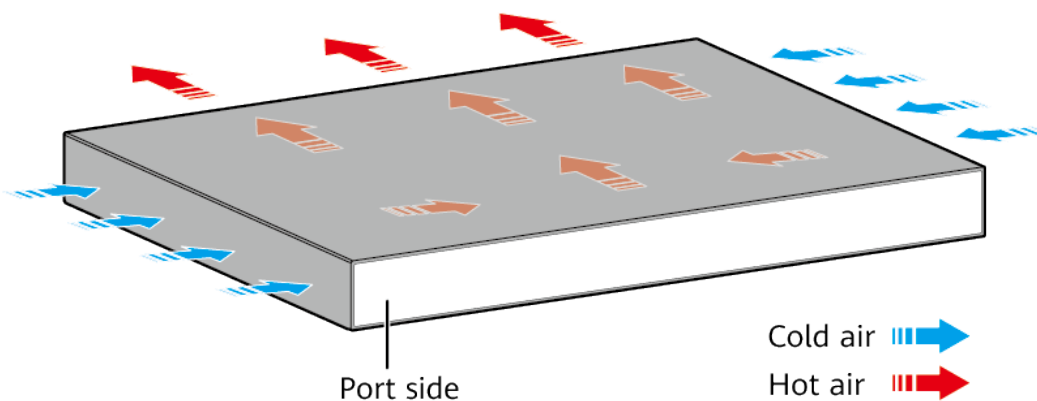
**Figure 4-166** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5700-48TP-PWR-SI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-444](#) lists technical specifications of the S5700-48TP-PWR-SI.

**Table 4-444** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB

Item	Description
Mean time between failures (MTBF)	71.7 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 1$ kV
Power supply surge protection	$\pm 2$ kV in differential mode, $\pm 4$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> <li>• Empty: <math>\leq 5</math> kg (11.02 lb)</li> <li>• Fully configured: <math>\leq 8.5</math> kg (18.74 lb)</li> </ul>
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	907 W (system power consumption: 167 W, PoE: 740 W)
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02352371

## 4.10.7 S5700-26X-SI-12S-AC

### Version Mapping

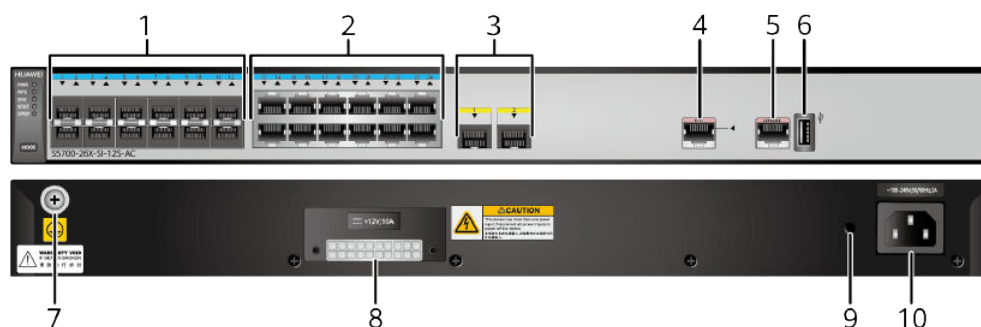
**Table 4-445** lists the mapping between the S5700-26X-SI-12S-AC chassis and software versions.

**Table 4-445** Version mapping

Series	Model	Software Version
S5700-SI	S5700-26X-SI-12S-AC	V200R002C00 to V200R005C02 <b>NOTE</b> This model does not match V200R003C02, V200R003C10, or V200R005C01.

### Appearance and Structure

**Figure 4-167** S5700-26X-SI-12S-AC appearance





1	<p>Twelve 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>	2	<p>Twelve 10/100/1000BASE-T ports</p>
3	<p>Two 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module (applicable in V200R005C00)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables (applicable in V200R003C00 and later versions)</b></li> </ul>	4	<p>One ETH management port</p>
5	<p>One console port</p>	6	<p>One USB port</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	8	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <b>RPS cable</b>, which is not hot swappable.</p>
9	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>	10	<p>AC socket</p> <p><b>NOTE</b> It is used with an <b>AC power cable</b>.</p>

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-446](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-446** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-447](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-447** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-448](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-448** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-449](#).

**Table 4-449** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 4-450](#) describes the attributes of an ETH management port.

**Table 4-450** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

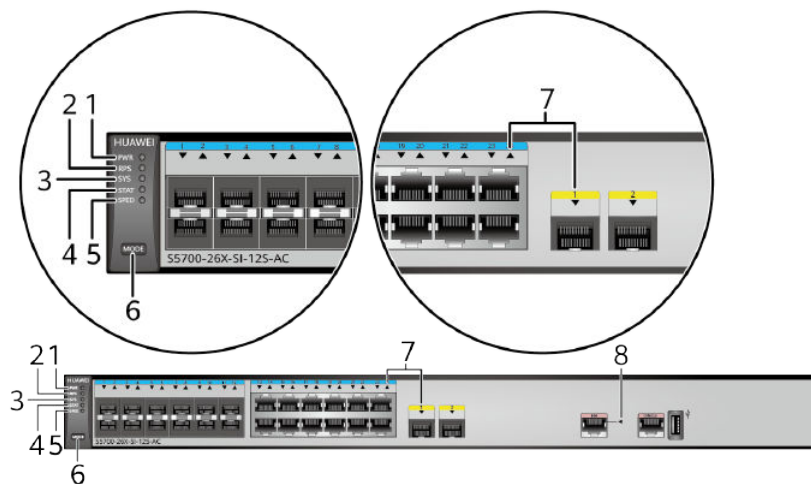
The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

**Figure 4-168** Indicators on the S5700-26X-SI-12S-AC



**Table 4-451** Description of indicators on the switch

Number	Indicator/ Button	Color	Description
1	PWR: power supply indicator	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the RPS system.
2	RPS: RPS power supply indicator	-	Off: No RPS is connected to the switch.

Number	Indicator/ Button	Color	Description
		Green	<ul style="list-style-type: none"> <li>Steady on: The RPS is in cold backup state.</li> <li>Blinking: The RPS is providing power for another device and cannot provide power for the current switch.</li> </ul>
		Yellow	Blinking: The RPS is providing power for the switch and the built-in power module of the switch is faulty.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> <li>Fast blinking: The system is starting or is copying the system software and configuration file from a USB flash drive.</li> <li>Slow blinking: The system is running normally.</li> </ul>
		Yellow	Blinking: The system has been successfully upgraded using a USB flash drive and the switch has restarted. You can remove the USB flash drive from the switch.
		Red	<ul style="list-style-type: none"> <li>Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.</li> <li>Blinking: The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.</li> </ul>
4	STAT: status indicator	Green	<ul style="list-style-type: none"> <li>Off: The status mode is not selected.</li> <li>Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.</li> </ul>

Number	Indicator/ Button	Color	Description
5	SPED: speed indicator	Green	<ul style="list-style-type: none"><li>Off: The speed mode is not selected.</li><li>Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.</li></ul>
6	MODE: mode switch button	-	<ul style="list-style-type: none"><li>When you press this button once, the SPED indicator turns green and the service port indicators show the speed of each service port.</li><li>When you press this button a second time, the STAT indicator turns green.</li></ul> <p>If you do not press the button within 45 seconds, the indicators restore to the default status. That is, the STAT indicator turns green, and the SPED indicator is off.</p>
7	Service port indicator <ul style="list-style-type: none"><li>GE electrical/optical ports: The ports are numbered from bottom to top and left to right, starting with 1.</li><li>10GE optical ports: Each port has an indicator above it.</li></ul>		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-452</a> .

Number	Indicator/ Button	Color	Description
8	ETH indicator	Green	<ul style="list-style-type: none"> <li>Off: No link is established on the port.</li> <li>Steady on: The port is connected.</li> <li>Blinking: The port is sending or receiving data.</li> </ul>

**Table 4-452** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>

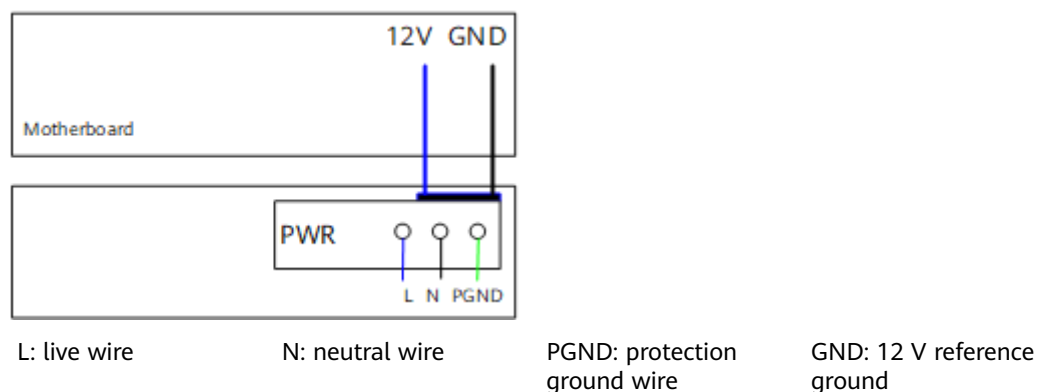
Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5700-26X-SI-12S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

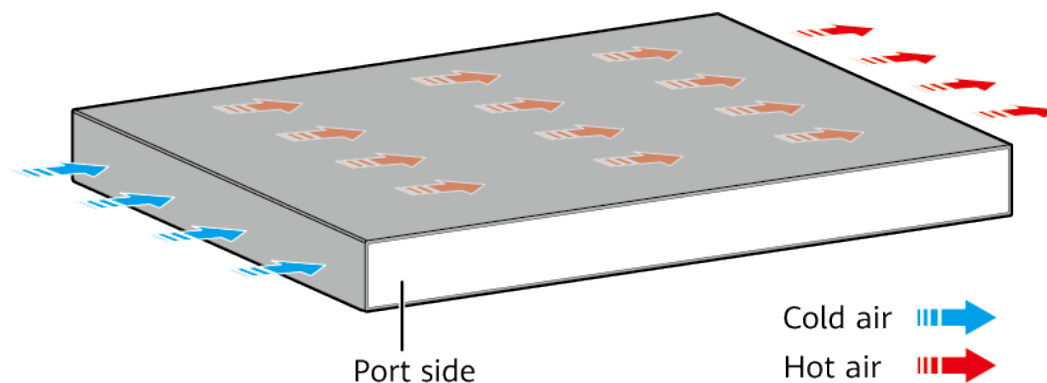
**Figure 4-169** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-169** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5700-26X-SI-12S-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.





 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-453](#) lists technical specifications of the S5700-26X-SI-12S-AC.

**Table 4-453** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	91.74 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight	$\leq 5$ kg (11.02 lb)
Stack ports	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	42.3 W

Item	Description
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 56.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02354039

## 4.10.8 S5700-28C-SI

### Version Mapping

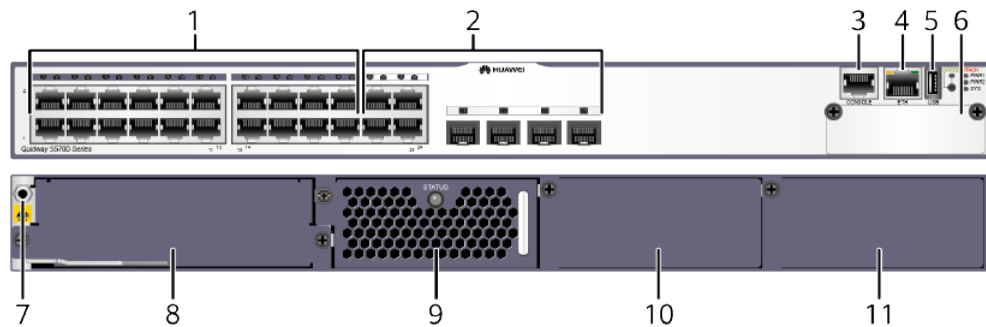
[Table 4-454](#) lists the mapping between the S5700-28C-SI and software versions.

**Table 4-454** Version mapping

Series	Model	Software Version
S5700-SI	S5700-28C-SI	V100R005C01 to V200R005C02 <b>NOTE</b> This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

## Appearance and Structure

Figure 4-170 S5700-28C-SI appearance



1	Twenty 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	Front card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <b>8.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card)</b></li> <li>• <b>8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card)</b></li> <li>• <b>8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)</b></li> </ul>
7	ESD jack <b>NOTE</b> Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	8	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <b>8.30 ES5D00ETPC00 (Stack Rear Card)</b></li> <li>• <b>8.31 ES5D00ETPB00 (Extended Rear Card)</b></li> </ul>

9	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">CX7E1FANA fan module</a>	1 0	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"><li>• <a href="#">150 W AC power module</a></li><li>• <a href="#">150 W DC power module</a></li></ul>
1 1	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"><li>• <a href="#">150 W AC power module</a></li><li>• <a href="#">150 W DC power module</a></li></ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-455](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-455** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

**Console port**

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-456](#).

**Table 4-456** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

**ETH management port**

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 4-457](#) describes the attributes of an ETH management port.

**Table 4-457** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

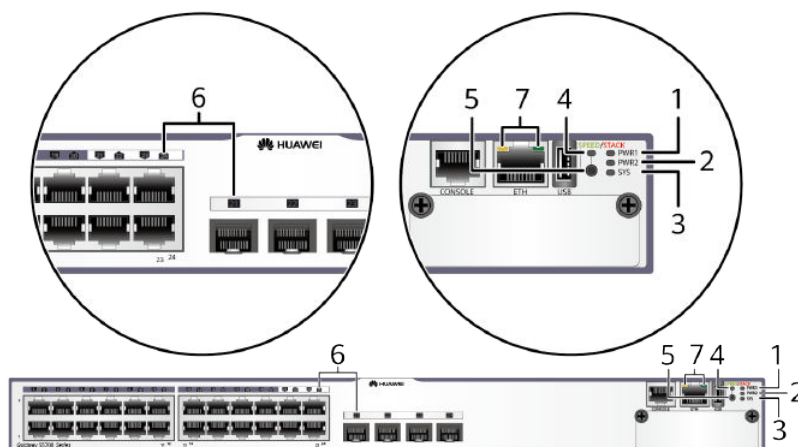
The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

**Figure 4-171** Indicators on the S5700-28C-SI



**Table 4-458** Description of indicators on the switch

Number	Indicator/ Button	Color	Description
1	PWR1: power supply indicator	-	Off: No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 1 and is working normally.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>• The power module in power module slot 1 is available but its power switch is not switched on.</li> <li>• The power module in power module slot 1 is available but is not connected to a power source.</li> <li>• The power module in power module slot 1 fails.</li> </ul>
2	PWR2: power supply indicator	-	Off: No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 2 and is working normally.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>• The power module in power module slot 2 is available but its power switch is not switched on.</li> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in power module slot 2 fails.</li> </ul>

Number	Indicator/ Button	Color	Description
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"><li>Steady on: The system is not operating properly or is starting.</li><li>Slow blinking: The system is running normally.</li><li>Fast blinking: The system is copying the system software and configuration file from a USB flash drive.</li></ul>
		Yellow	<ul style="list-style-type: none"><li>Steady on: The system is performing self-check during startup.</li><li>Blinking: The system has been successfully upgraded using a USB flash drive and the switch has restarted. You can remove the USB flash drive from the switch.</li></ul>
4	MODE: mode indicator	Red	<ul style="list-style-type: none"><li>Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.</li><li>Blinking: The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.</li></ul>
		-	Off: The service port indicators are in the status mode (default). In the status mode, the service port indicator shows the port link or activity state.
		Green	Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
		Red	Steady on: The service port indicators show the stack ID of the switch. After 45 seconds, the service port indicators automatically restore to the status mode.



Number	Indicator/Button	Color	Description
5	Mode switch button	-	<ul style="list-style-type: none"> <li>When you press this button once, the mode indicator turns green and the service port indicators show the speed of each service port.</li> <li>When you press this button a second time, the mode indicator turns red and the service port indicators show the stack status.</li> <li>When you press this button a third time, the mode indicator turns off.</li> </ul> <p>If you do not press the button within 45 seconds, the mode indicator restores to status mode.</p>
6	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-459</a> .	
7	ETH indicator	-	Off: No link is established on the port.
		Green	Steady on: The port is connected.
		Yellow	Blinking: The port is sending or receiving data.

**Table 4-459** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	<p>10M/100M/1000M port: The port is operating at 10/100 Mbit/s.</p> <p>1000M/10GE port: The port is operating at 1000 Mbit/s.</p>

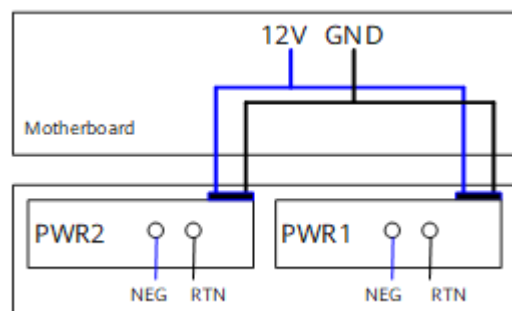
Display Mode	Color	Status	Description
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"><li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li><li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li></ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"><li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li><li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li></ul>

## Power Supply Configuration

The S5700-28C-SI can use a single power module or double power modules for 1+1 power redundancy. In versions prior to V200R005C00, the AC and DC power modules cannot be configured on the same device, while in V200R005C00 and later versions, they can be configured on the same device.

**Figure 4-172** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-172** Power supply connections of dual DC power modules



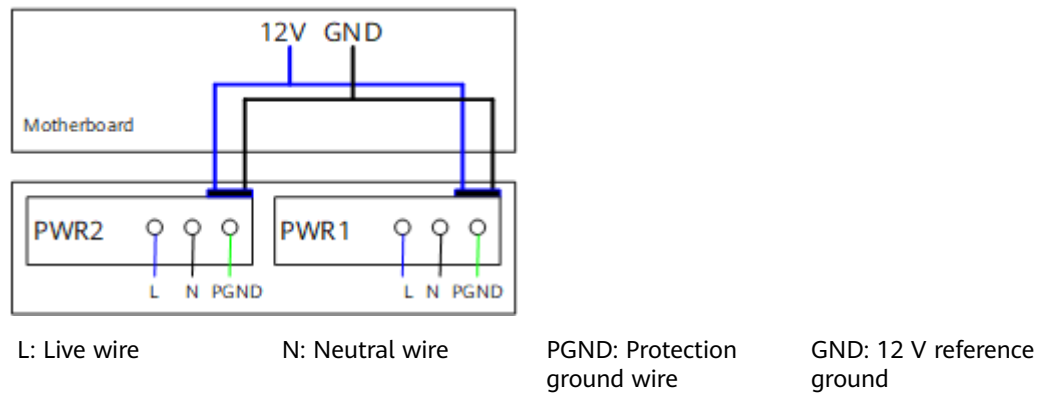
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

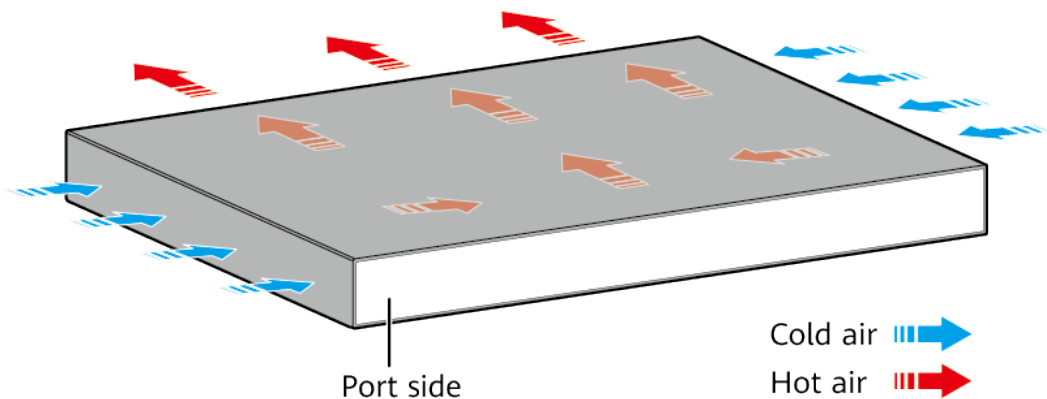
**Figure 4-173** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-173** Power supply connections of dual AC power modules



## Heat Dissipation

The S5700-28C-SI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-460** lists technical specifications of the S5700-28C-SI.

**Table 4-460** Technical specifications

Item	Description
Memory (RAM)	256 MB

Item	Description
Flash	32 MB
Mean time between failures (MTBF)	53.7 years when a 2-port 10GE interface card is configured, 74.9 years when a 4-port GE front card is configured, 29.58 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: ±6 kV in differential mode, ±6 kV in common mode</li> <li>Using DC power modules: ±1 kV in differential mode, ±2 kV in common mode</li> </ul>
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> <li>Empty: ≤ 5 kg (11.02 lb)</li> <li>Fully configured: ≤ 8.5 kg (18.74 lb)</li> </ul>
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	56 W
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 41 dB(A)

Item	Description
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	02352341

## 4.10.9 S5700-28C-PWR-SI

### Version Mapping

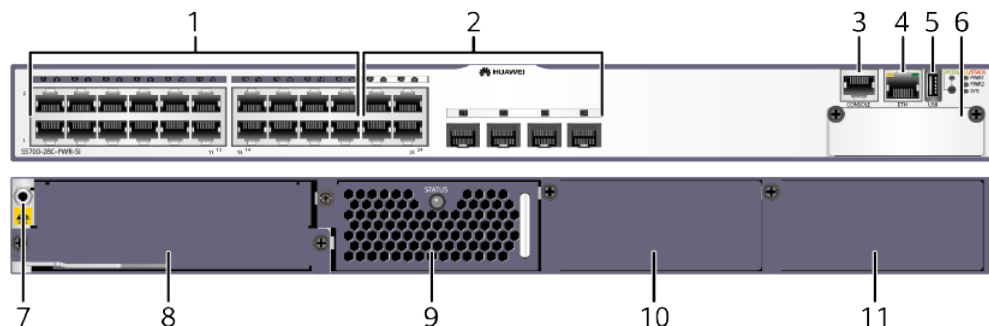
[Table 4-461](#) lists the mapping between the S5700-28C-PWR-SI and software versions.

**Table 4-461** Version mapping

Series	Model	Software Version
S5700-SI	S5700-28C-PWR-SI	V200R001C00 to V200R005C02 <b>NOTE</b> This model does not match V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

### Appearance and Structure

**Figure 4-174** S5700-28C-PWR-SI appearance



1	Twenty PoE+ 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	Front card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <b>8.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card)</b></li> <li>• <b>8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card)</b></li> <li>• <b>8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)</b></li> </ul>
7	ESD jack <b>NOTE</b> Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	8	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <b>8.30 ES5D00ETPC00 (Stack Rear Card)</b></li> <li>• <b>8.31 ES5D00ETPB00 (Extended Rear Card)</b></li> </ul>
9	Fan slot <b>NOTE</b> Applicable fan module: <b>CX7E1FANA fan module</b>	10	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <b>250 W AC PoE power module</b></li> <li>• <b>500 W AC PoE power module</b></li> </ul>
11	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <b>250 W AC PoE power module</b></li> <li>• <b>500 W AC PoE power module</b></li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-462](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-462** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-463](#).

**Table 4-463** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. **Table 4-464** describes the attributes of an ETH management port.

**Table 4-464** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.



## Indicator Description

Figure 4-175 Indicators on the S5700-28C-PWR-SI

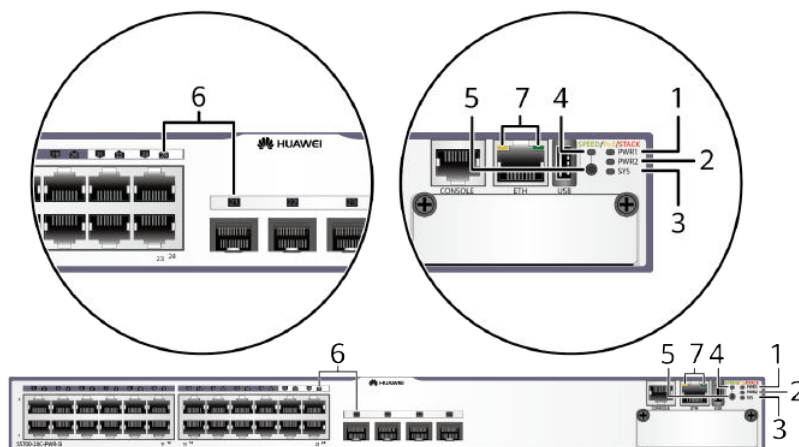


Table 4-465 Description of indicators on the switch

Number	Indicator/Button	Color	Description
1	PWR1: power supply indicator	-	Off: No power module is available in power module slot 1, or the power module is faulty when a single power module is configured.
		Green	Steady on: The power module in power module slot 1 is working properly.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>The power module in power module slot 1 is available but is not connected to a power source.</li> <li>The system power and PoE power are faulty.</li> </ul>
		Yellow	Steady on: If a single power module is installed, the PoE power is out of range. If dual power modules are installed, the system power or PoE power is out of range.

Number	Indicator/Button	Color	Description
2	PWR2: power supply indicator	-	Off: No power module is available in power module slot 2, or the power module is faulty when a single power module is configured.
		Green	Steady on: The power module in power module slot 2 is working properly.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>• A power module is available in this slot but its power switch is in the OFF position.</li> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The system power and PoE power are faulty.</li> </ul>
		Yellow	Steady on: If a single power module is installed, the PoE power is out of range. If dual power modules are installed, the system power or PoE power is out of range.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> <li>• Steady on: The system is not operating properly or is starting.</li> <li>• Slow blinking: The system is running normally.</li> <li>• Fast blinking: The system is copying the system software and configuration file from a USB flash drive.</li> </ul>
		Yellow	<ul style="list-style-type: none"> <li>• Steady on: The system is performing self-check during startup.</li> <li>• Blinking: The system has been successfully upgraded using a USB flash drive and the switch has restarted. You can remove the USB flash drive from the switch.</li> </ul>

Number	Indicator/ Button	Color	Description
		Red	<ul style="list-style-type: none"><li>Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.</li><li>Blinking: The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.</li></ul>
4	Mode indicator	-	Off: The service port indicators are in the status mode (default). In the status mode, the service port indicator shows the port link or activity state.
		Green	Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
		Red	Steady on: The service port indicators show the stack ID of the switch. After 45 seconds, the service port indicators automatically restore to the status mode.
		Yellow	Steady on: The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

Number	Indicator/ Button	Color	Description
5	Mode switch button	-	<ul style="list-style-type: none"> <li>When you press this button once, the mode indicator turns green and the service port indicators show the speed of each service port.</li> <li>When you press this button a second time, the mode indicator turns red and the service port indicators show the stack status.</li> <li>When you press this button a third time, the mode indicator turns yellow and the service port indicators show the PoE status.</li> <li>When you press this button a fourth time, the mode indicator turns off.</li> </ul> <p>If you do not press the button within 45 seconds, the mode indicator restores to status mode.</p>
6	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-466</a> .	
7	ETH indicator	-	Off: No link is established on the port.
		Green	Steady on: The port is connected.
		Yellow	Blinking: The port is sending or receiving data.

**Table 4-466** Description of service port indicators in different modes

Display Mode	Color	Description
Status	Green	<ul style="list-style-type: none"> <li>Off: The port is not connected or has been shut down.</li> <li>Steady on: The port is connected.</li> <li>Blinking: The port is sending or receiving data.</li> </ul>

Display Mode	Color	Description
Speed	Green	<ul style="list-style-type: none"> <li>● Off: The port is not connected or has been shut down.</li> <li>● Steady on:                             <ul style="list-style-type: none"> <li>10M/100M/1000M port: The port is operating at 10/100 Mbit/s.</li> <li>1000M/10GE port: The port is operating at 1000 Mbit/s.</li> </ul> </li> <li>● Blinking:                             <ul style="list-style-type: none"> <li>10M/100M/1000M port: The port is operating at 1000 Mbit/s.</li> <li>1000M/10GE port: The port is operating at 10 Gbit/s.</li> </ul> </li> </ul>
PoE	Green	<ul style="list-style-type: none"> <li>● Off: The port does not provide PoE power.</li> <li>● Steady on: The port is providing PoE power.</li> <li>● Blinking: The PD connected to the port is not a standard PD or its power exceeds the maximum power or power threshold of the port.</li> </ul>
Stack	Green	<ul style="list-style-type: none"> <li>● Off: The STCK mode is not selected.</li> <li>● If the indicator is steady on, the switch is not a master switch:                             <ul style="list-style-type: none"> <li>– If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>– If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul> </li> <li>● If the indicator is blinking, the switch is a master switch:                             <ul style="list-style-type: none"> <li>– If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>– If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul> </li> </ul>

## Power Supply Configuration

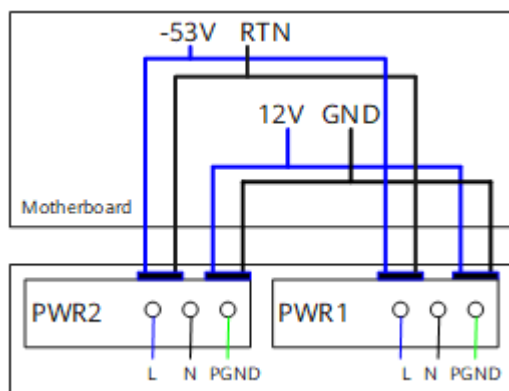
The S5700-28C-PWR-SI is a PoE switch. It has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). [Table 4-467](#) lists its power supply configurations.

**Table 4-467** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	-	123.2 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 8</li><li>• 802.3at (30 W per port): 4</li></ul>
500 W	-	369.6 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 24</li><li>• 802.3at (30 W per port): 12</li></ul>
250 W	250 W	246.4 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 16</li><li>• 802.3at (30 W per port): 8</li></ul>
500 W	500 W	369.6 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 24</li><li>• 802.3at (30 W per port): 12</li></ul>

[Figure 4-176](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

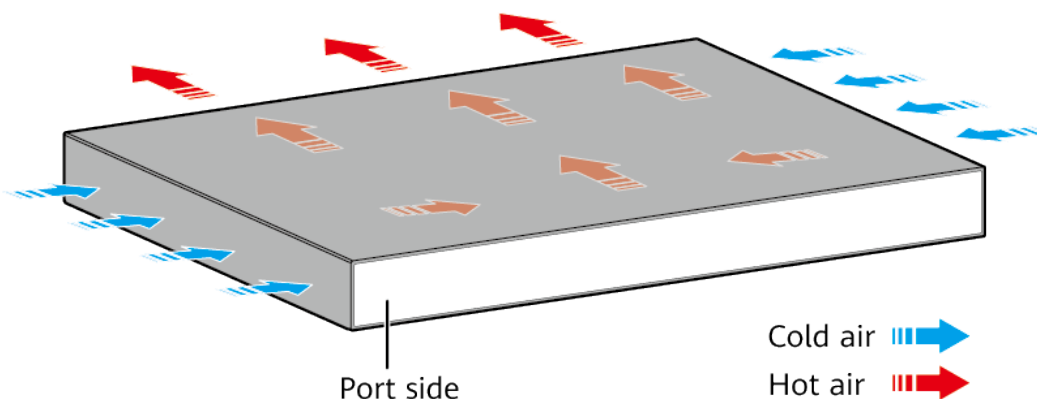
**Figure 4-176** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5700-28C-PWR-SI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-468](#) lists technical specifications of the S5700-28C-PWR-SI.

**Table 4-468** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB

Item	Description
Mean time between failures (MTBF)	53.6 years when a 2-port 10GE interface card is configured, 74.6 years when a 4-port GE front card is configured, 25.68 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±1 kV in common mode
Power supply surge protection	±2 kV in differential mode, ±4 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> <li>• Empty: ≤ 5 kg (11.02 lb)</li> <li>• Fully configured: ≤ 8.5 kg (18.74 lb)</li> </ul>
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	466 W (system power consumption: 96 W, PoE: 370 W)
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing



Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02354137

## 4.10.10 S5700-52C-SI

### Version Mapping

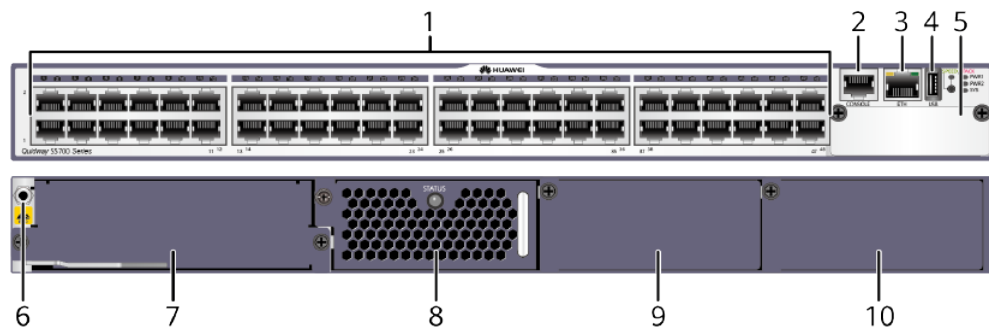
[Table 4-469](#) lists the mapping between the S5700-52C-SI and software versions.

**Table 4-469** Version mapping

Series	Model	Software Version
S5700-SI	S5700-52C-SI	V100R005C01 to V200R005C02 <b>NOTE</b> This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

### Appearance and Structure

**Figure 4-177** S5700-52C-SI appearance



1	Forty-eight 10/100/1000BASE-T ports	2	One console port
3	One ETH management port	4	One USB port

5	<p>Front card slot</p> <p><b>NOTE</b></p> <p>Card supported:</p> <ul style="list-style-type: none"> <li>• <a href="#">8.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card)</a></li> <li>• <a href="#">8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card)</a></li> <li>• <a href="#">8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)</a></li> </ul>	6	<p>ESD jack</p> <p><b>NOTE</b></p> <p>Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.</p>
7	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Card supported:</p> <ul style="list-style-type: none"> <li>• <a href="#">8.30 ES5D00ETPC00 (Stack Rear Card)</a></li> <li>• <a href="#">8.31 ES5D00ETPB00 (Extended Rear Card)</a></li> </ul>	8	<p>Fan slot</p> <p><b>NOTE</b></p> <p>Applicable fan module: <a href="#">CX7E1FANA fan module</a></p>
9	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	10	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-470](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-470** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-471](#).

**Table 4-471** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 4-472](#) describes the attributes of an ETH management port.

**Table 4-472** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

**NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

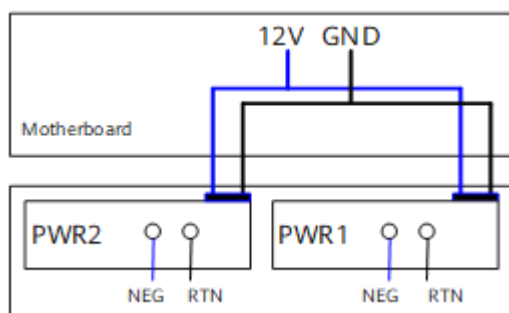
The S5700-52C-SI has the same types of indicators as the S5700-28C-SI. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5700-52C-SI can use a single power module or double power modules for 1+1 power redundancy. In versions prior to V200R005C00, the switch cannot use pluggable AC and DC power modules simultaneously. In V200R005C00 and later versions, the switch supports mixing of pluggable AC and DC power modules.

[Figure 4-178](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-178** Power supply connections of dual DC power modules



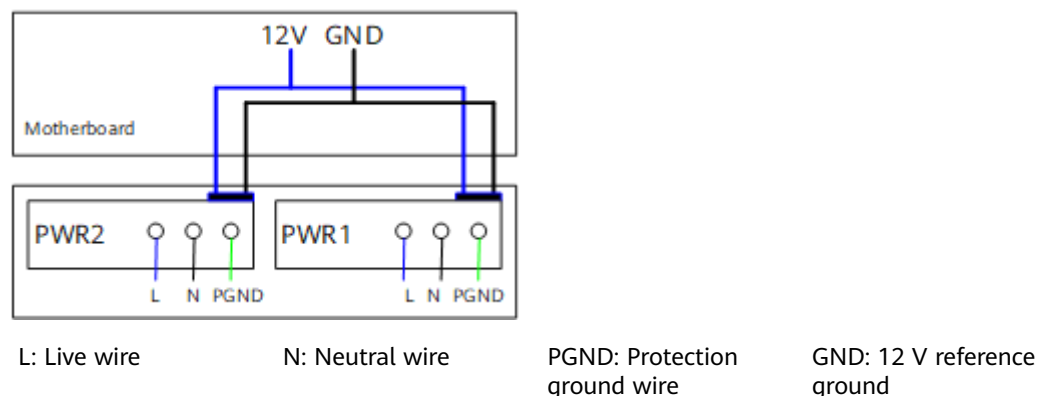
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

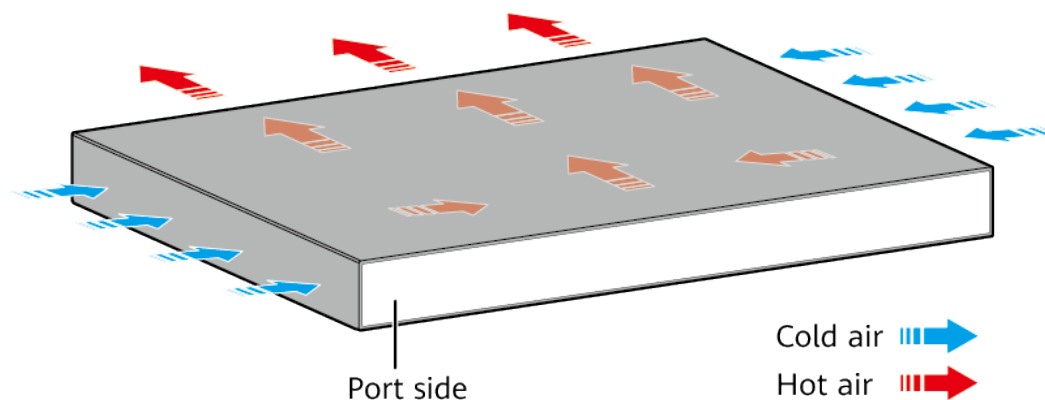
[Figure 4-179](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-179** Power supply connections of dual AC power modules



## Heat Dissipation

The S5700-52C-SI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-473** lists technical specifications of the S5700-52C-SI.

**Table 4-473** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	51.3 years when a 2-port 10GE interface card is configured, 70.3 years when a 4-port GE front card is configured, 28.58 years when a 4x10GE front card is configured

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 2$ kV
Power supply surge protection	<ul style="list-style-type: none"><li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li><li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li></ul>
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"><li>Empty: <math>\leq 5</math> kg (11.02 lb)</li><li>Fully configured: <math>\leq 8.5</math> kg (18.74 lb)</li></ul>
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	78 W
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 41 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"><li>AC power modules configured: 0-5000 m (0-16404 ft.)</li><li>DC power modules configured: 0-2000 m (0-6562 ft.)</li></ul>

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02352356

## 4.10.11 S5700-52C-PWR-SI

### Version Mapping

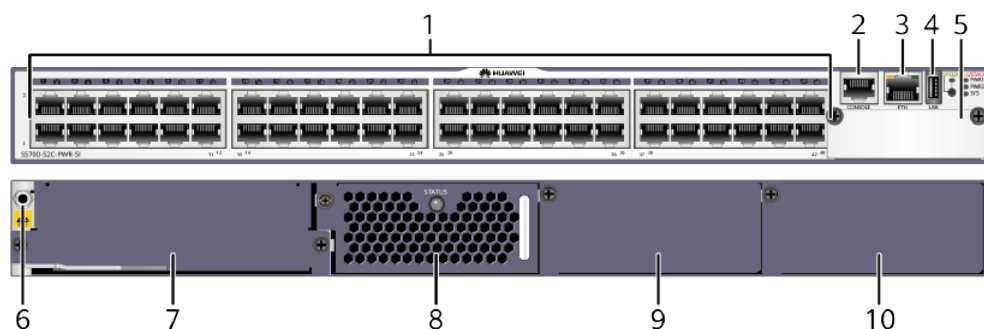
**Table 4-474** lists the mapping between the S5700-52C-PWR-SI and software versions.

**Table 4-474** Version mapping

Series	Model	Software Version
S5700-SI	S5700-52C-PWR-SI	V200R001C00 to V200R005C02 <b>NOTE</b> This model does not match V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

### Appearance and Structure

**Figure 4-180** S5700-52C-PWR-SI appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	One console port
3	One ETH management port	4	One USB port

5	<p>Front card slot</p> <p><b>NOTE</b></p> <p>Card supported:</p> <ul style="list-style-type: none"> <li>• <a href="#">8.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card)</a></li> <li>• <a href="#">8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card)</a></li> <li>• <a href="#">8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)</a></li> </ul>	6	<p>ESD jack</p> <p><b>NOTE</b></p> <p>Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.</p>
7	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Card supported:</p> <ul style="list-style-type: none"> <li>• <a href="#">8.30 ES5D00ETPC00 (Stack Rear Card)</a></li> <li>• <a href="#">8.31 ES5D00ETPB00 (Extended Rear Card)</a></li> </ul>	8	<p>Fan slot</p> <p><b>NOTE</b></p> <p>Applicable fan module: <a href="#">CX7E1FANA fan module</a></p>
9	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">250 W AC PoE power module</a></li> <li>• <a href="#">500 W AC PoE power module</a></li> </ul>	10	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">250 W AC PoE power module</a></li> <li>• <a href="#">500 W AC PoE power module</a></li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-475](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-475** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Console port



The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-476](#).

**Table 4-476** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 4-477](#) describes the attributes of an ETH management port.

**Table 4-477** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

 NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5700-52C-PWR-SI has the same types of indicators as the S5700-28C-PWR-SI. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5700-52C-PWR-SI is a PoE switch. It has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). [Table 4-478](#) lists its power supply configurations.

**Table 4-478** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	–	123.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 8</li> <li>802.3at (30 W per port): 4</li> </ul>
500 W	–	369.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
250 W	250 W	246.4 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 16</li> <li>802.3at (30 W per port): 8</li> </ul>
500 W	500 W	739.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 24</li> </ul>

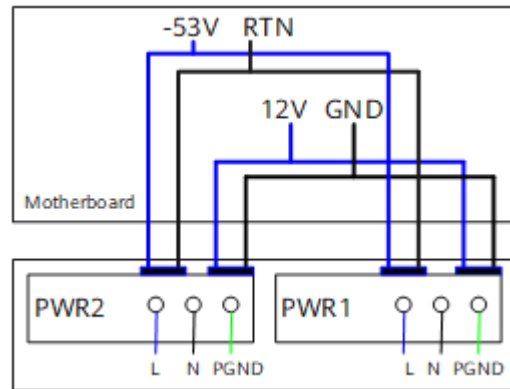
 NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 4-181](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the

motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

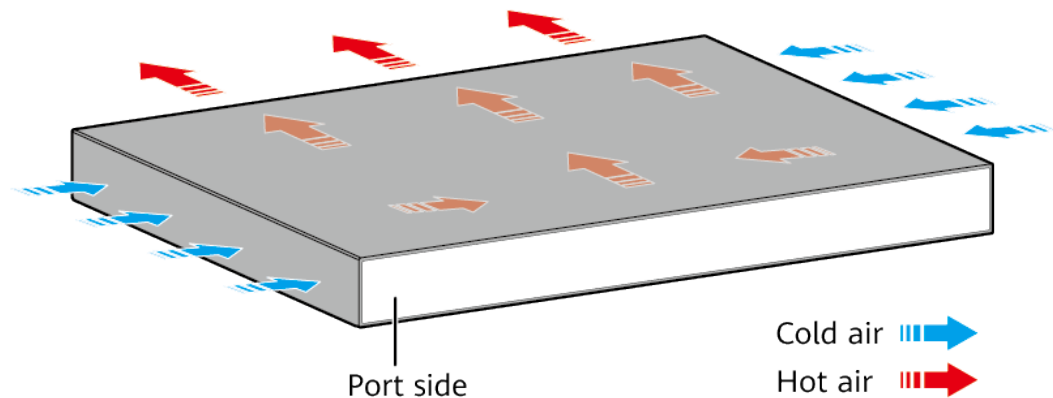
**Figure 4-181** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5700-52C-PWR-SI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-479** lists technical specifications of the S5700-52C-PWR-SI.

**Table 4-479** Technical specifications

Item	Description
Memory (RAM)	256 MB

Item	Description
Flash	32 MB
Mean time between failures (MTBF)	50.4 years when a 2-port 10GE interface card is configured, 68.6 years when a 4-port GE front card is configured, 35.58 years when a 4x10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 1$ kV
Power supply surge protection	$\pm 2$ kV in differential mode, $\pm 4$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"><li>• Empty: <math>\leq 5</math> kg (11.02 lb)</li><li>• Fully configured: <math>\leq 8.5</math> kg (18.74 lb)</li></ul>
Stack port	Two stack ports available on each stack card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	917 W (system power consumption: 177 W, PoE: 740 W)
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 45 dB(A)

Item	Description
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02354135

## 4.11 S5720-SI

### 4.11.1 S5720-14X-PWH-SI-AC

#### Version Mapping

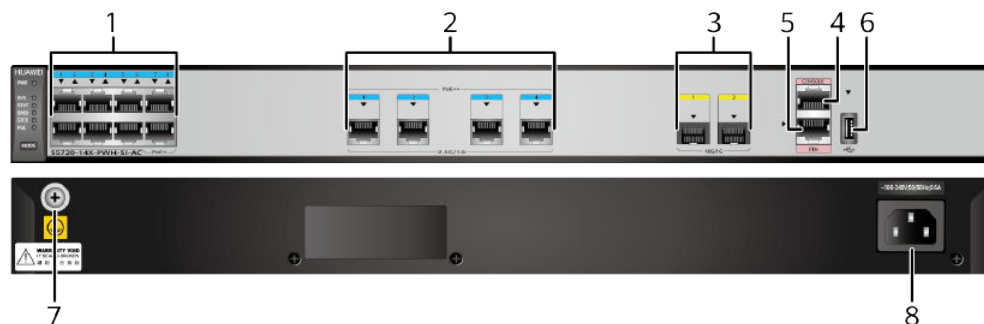
[Table 4-480](#) lists the mapping between the S5720-14X-PWH-SI-AC chassis and software versions.

**Table 4-480** Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-14X-PWH-SI-AC	V200R009C00 to V200R019C10 versions

#### Appearance and Structure

**Figure 4-182** S5720-14X-PWH-SI-AC appearance



1	Eight PoE+ 10/100/1000BASE-T ports	2	Four PoE++ 100M/1000M/2.5GE BASE-T ports (MultiGE port)
3	Two 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>	4	One console port  <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.
5	One ETH management port	6	One USB port
7	Ground screw  <b>NOTE</b> It is used with a <b>ground cable</b> .	8	AC socket  <b>NOTE</b> It is used with an <b>AC power cable</b> .

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 4-481** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-481** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

Attribute	Description
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 100M/1000M/2.5G BASE-T port

A 100M/1000M/2.5G BASE-T port (MultiGE port) sends and receives service data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s, and must use an **Ethernet cable**. If the 2.5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category. [Table 4-482](#) describes the attributes of a 100M/1000M/2.5G BASE-T port.

**Table 4-482** Attributes of a 100M/1000M/2.5G BASE-T port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3u, IEEE802.3ab, IEEE802.3bz, mgbase-t
Working mode	100/1000/2500 Mbit/s auto-sensing
Maximum transmission distance	100 m

A 100M/1000M/2.5G BASE-T Ethernet port can connect to the following devices:

- All switches providing FE electrical interfaces, GE electrical interfaces or MultiGE electrical interfaces
- AP: AP7050DN-E (with 2.5G uplink interfaces) running V200R007C00 and AP5030DN-S (with GE uplink interfaces)
- Pico: BTS3911B running V100R010C10SPC092T

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-483](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-483** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-484](#).

**Table 4-484** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-485](#) describes the attributes of an ETH management port.

**Table 4-485** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing



Attribute	Description
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

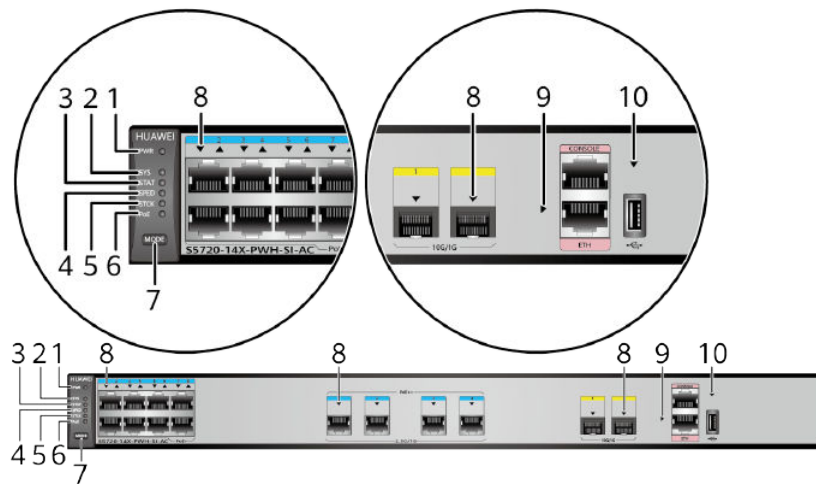
## Indicator Description

#### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-183** Indicators on the S5720-14X-PWH-SI-AC



**NOTE**

The S5720-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5720-SI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

**Table 4-486** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
			Yellow or red	Steady on	The built-in power module has failed.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.

No.	Indicator	Name	Color	Status	Description
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
3	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
5	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-487</a> .		
9	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-487** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.

Display Mode	Color	Status	Description
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> <li>The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.</li> <li>The total power consumption of PDs has reached the maximum power of the switch.</li> <li>The manual power management mode is used and the port is not enabled to provide power to the PD.</li> </ul>
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

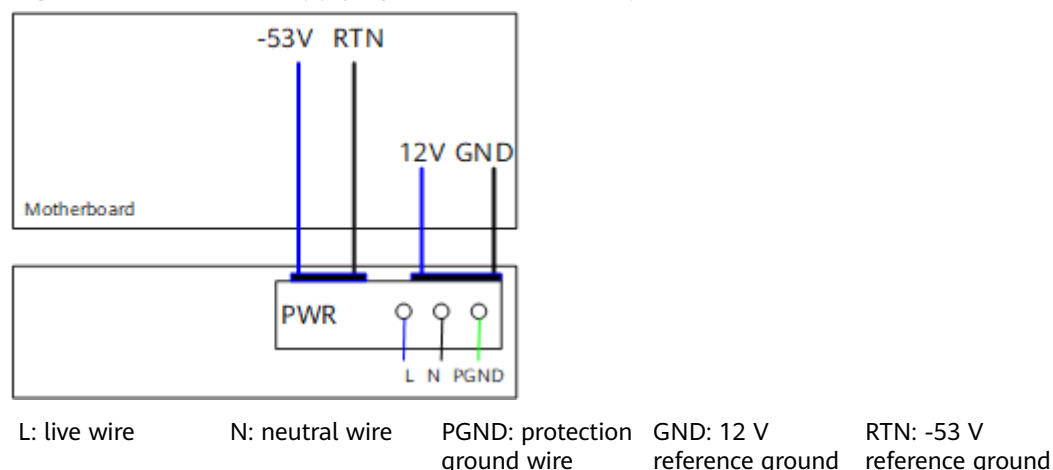
The S5720-14X-PWH-SI-AC has a built-in power module and does not support pluggable power modules. The S5720-14X-PWH-SI-AC is a PoE switch and has a built-in PoE power module.

**Table 4-488** Power supply configurations (built-in power module)

Available PoE Power	Maximum Number of Ports (Fully Loaded)
369.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 12</li> <li>802.3at (30 W per port): 12</li> <li>Non-standard (90 W per port): 4 (only PoE++ ports)</li> </ul> <p><b>NOTE</b> A PoE++ port is a non-standard port and can only provide 90 W power for the attached PD.</p>

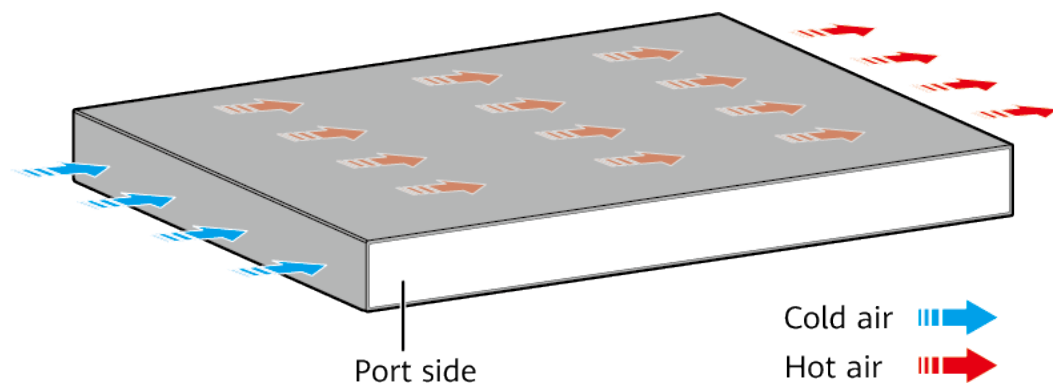
**Figure 4-184** shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

**Figure 4-184** Power supply by a built-in AC PoE power module



## Heat Dissipation

The S5720-14X-PWH-SI-AC has three built-in fans for forced air cooling. The airflow direction is left-to-right.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-489** lists technical specifications of the S5720-14X-PWH-SI-AC.

**Table 4-489** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	86.55 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 315.0 mm (1.72 in. x 17.4 in. x 12.4 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 324.0 mm (1.72 in. x 17.4 in. x 12.76 in.)</li> </ul>
Weight (with packaging)	5.9 kg (13.01 lb)
Stack ports	First eight GE electrical ports 10GE SFP+ ports (V200R010C00 and later versions)
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz



Item	Description
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>• Not providing the PoE function: 52 W</li> <li>• 100% PoE loads: 422 W (system power consumption: 52 W, PoE: 370 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	44.94 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b>                      When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b>                      When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 52.8 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350MTV

## 4.11.2 S5720-28P-SI-AC

### Version Mapping

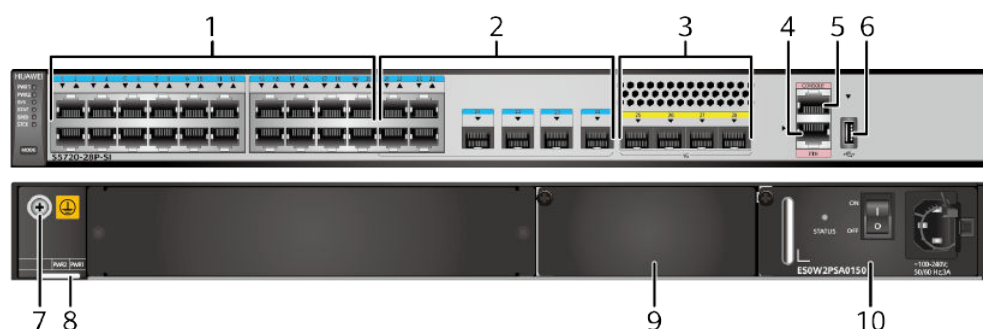
[Table 4-490](#) lists the mapping between the S5720-28P-SI-AC chassis and software versions.

**Table 4-490** Version mapping

Series		Model	Software Version
S5720-SI	S5720-P-SI	S5720-28P-SI-AC	V200R008C00 to V200R019C10 versions

### Appearance and Structure

**Figure 4-185** S5720-28P-SI-AC appearance



1	Twenty 10/100/1000BASE-T ports	2	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>
3	<p>Four 1000BASE-X ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (only applicable to stack ports, a maximum transmission distance of 10 km, OSXD22N00 not supported)</b></li> <li>• <b>1 m, 3 m, 10 m SFP+ high-speed copper cables (only applicable to stack ports)</b></li> <li>• <b>5 m SFP+ high-speed copper cable (only for stack ports and applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables (only applicable to stack ports)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>	4	One ETH management port

5	<p>One console port</p> <p><b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	<p>One USB port</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>ESN label</p> <p><b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">60 W AC power module</a> (supported in V200R011C10 and later versions)</li> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	10	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">60 W AC power module</a> (supported in V200R011C10 and later versions)</li> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-491](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-491** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

**1000BASE-X port**

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. When a 1000BASE-X port uses a 10GE optical module, SFP+ high-speed copper cable, or active optical cable (AOC), the port can only be used for stack connection. [Table 4-492](#) describes the attributes of a 1000BASE-X port.

**Table 4-492** Attributes of a 1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3z

**Console port**

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-493](#).

**Table 4-493** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-494](#) describes the attributes of an ETH management port.

**Table 4-494** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

**NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-28P-SI-AC has similar indicators to those on the S5720-52X-PWR-SI-AC, except that the S5720-28P-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

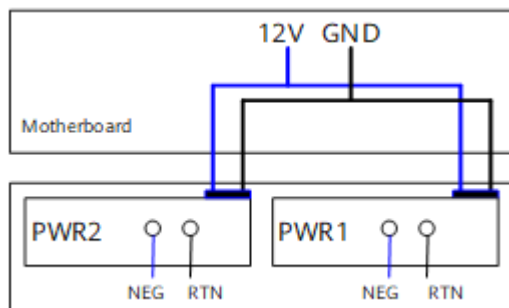
The S5720-28P-SI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

**NOTE**

If a 60 W power module and a 150 W power module is used in the same switch, the maximum output power of the 150 W power module is 60 W.

[Figure 4-186](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-186** Power supply connections of dual DC power modules



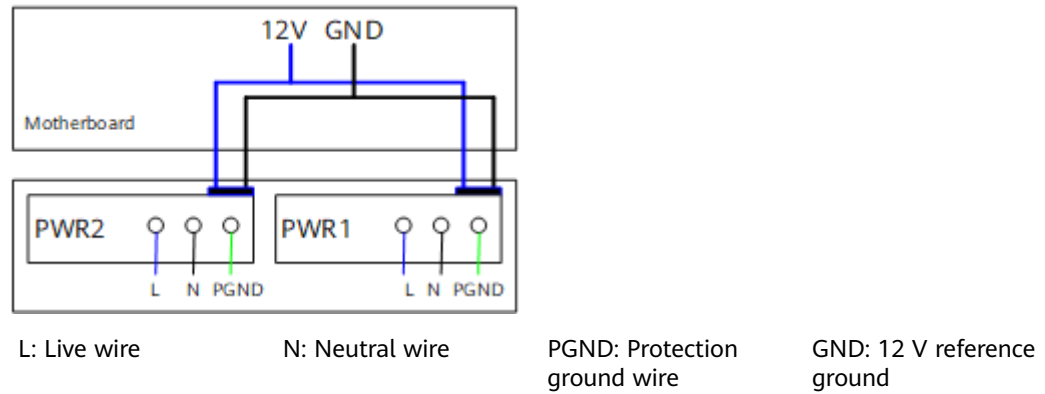
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

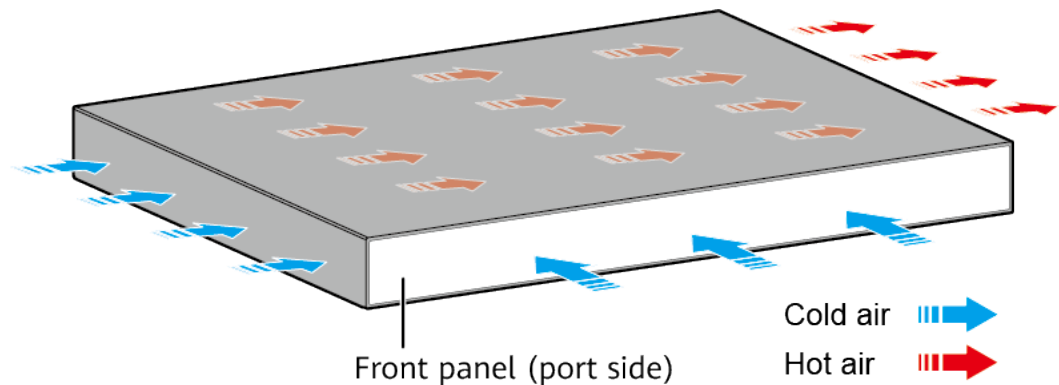
[Figure 4-187](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-187** Power supply connections of dual AC power modules



## Heat Dissipation

The S5720-28P-SI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-495** lists technical specifications of the S5720-28P-SI-AC.

**Table 4-495** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	85.48 years



Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	9.1 kg (20.06 lb)
Stack ports	GE electrical ports and GE SFP optical ports except combo ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	34.6 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	21.2 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 52 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350DLS

### 4.11.3 S5720-52P-SI-AC

#### Version Mapping

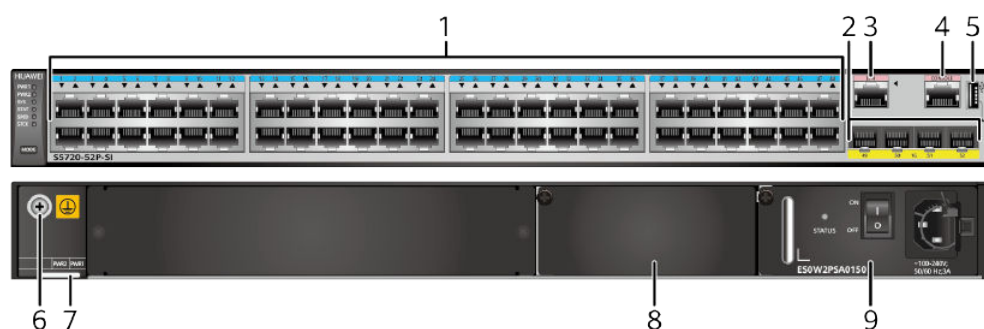
[Table 4-496](#) lists the mapping between the S5720-52P-SI-AC chassis and software versions.

**Table 4-496** Version mapping

Series		Model	Software Version
S5720-SI	S5720-P-SI	S5720-52P-SI-AC	V200R008C00 to V200R019C10 versions

#### Appearance and Structure

**Figure 4-188** S5720-52P-SI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (only applicable to stack ports, a maximum transmission distance of 10 km, OSXD22N00 not supported)</b></li> <li>• <b>1 m, 3 m, 10 m SFP+ high-speed copper cables (only applicable to stack ports)</b></li> <li>• <b>5 m SFP+ high-speed copper cable (only for stack ports and applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables (only applicable to stack ports)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p><b>NOTE</b></p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>

7	ESN label  <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.	8	Power module slot 2  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <b>60 W AC power module</b> (supported in V200R011C10 and later versions)</li> <li>• <b>150 W AC power module</b></li> <li>• <b>150 W DC power module</b></li> </ul>
9	Power module slot 1  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <b>60 W AC power module</b> (supported in V200R011C10 and later versions)</li> <li>• <b>150 W AC power module</b></li> <li>• <b>150 W DC power module</b></li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 4-497](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-497** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. When a 1000BASE-X port uses a 10GE optical module, SFP+ high-speed copper cable, or active optical cable (AOC), the port can only be used for stack connection. [Table 4-498](#) describes the attributes of a 1000BASE-X port.

**Table 4-498** Attributes of a 1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-499](#).

**Table 4-499** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-500](#) describes the attributes of an ETH management port.

**Table 4-500** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3

Attribute	Description
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-52P-SI-AC has similar indicators to those on the S5720-52X-PWR-SI-AC, except that the S5720-52P-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

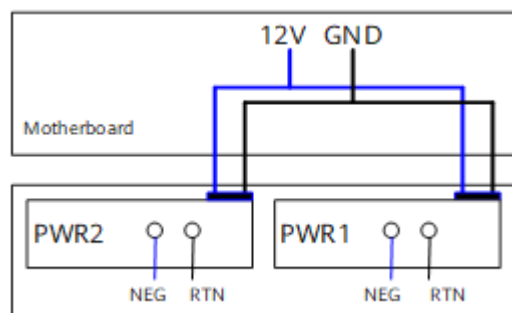
The S5720-52P-SI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

#### NOTE

If a 60 W power module and a 150 W power module is used in the same switch, the maximum output power of the 150 W power module is 60 W.

[Figure 4-189](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-189** Power supply connections of dual DC power modules



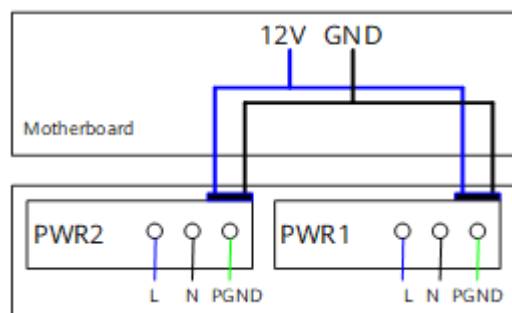
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

**Figure 4-190** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-190** Power supply connections of dual AC power modules



L: Live wire

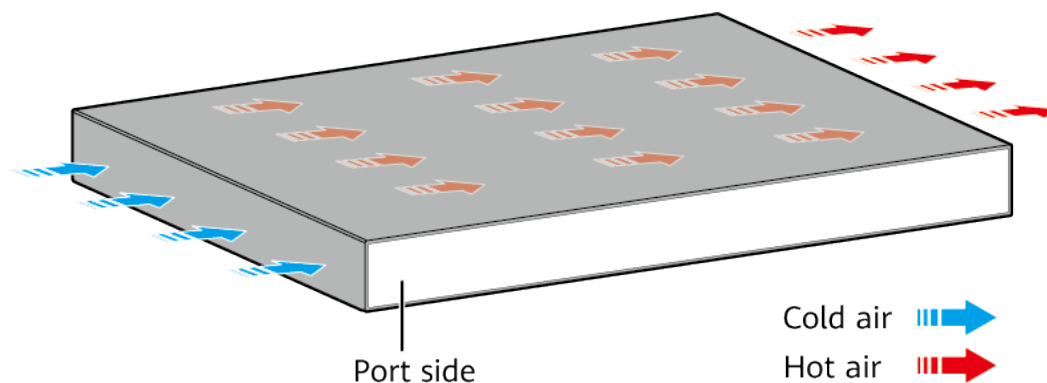
N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

## Heat Dissipation

The S5720-52P-SI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.





 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-501** lists technical specifications of the S5720-52P-SI-AC.

**Table 4-501** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	75.66 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	9.5 kg (20.95 lb)
Stack ports	GE electrical ports and GE SFP optical ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	53.6 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	32.2 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 52 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	02350DLU

## 4.11.4 S5720-28X-SI-AC

### Version Mapping

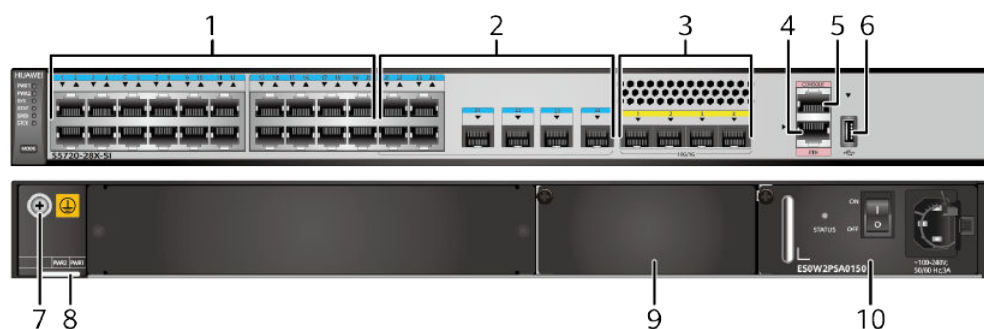
**Table 4-502** lists the mapping between the S5720-28X-SI-AC chassis and software versions.

**Table 4-502** Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-28X-SI-AC	V200R008C00 to V200R019C10 versions

### Appearance and Structure

**Figure 4-191** S5720-28X-SI-AC appearance



1	Twenty 10/100/1000BASE-T ports	2	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	One ETH management port

5	<p>One console port</p> <p><b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	<p>One USB port</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>ESN label</p> <p><b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">60 W AC power module</a> (supported in V200R011C10 and later versions)</li> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	10	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">60 W AC power module</a> (supported in V200R011C10 and later versions)</li> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-503](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-503** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

**10GE SFP+ port**

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-504](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-504** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

**Console port**

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-505](#).

**Table 4-505** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-506](#) describes the attributes of an ETH management port.

**Table 4-506** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

**NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-28X-SI-AC has similar indicators as those on the S5720-52X-PWR-SI-AC, except that the S5720-28X-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

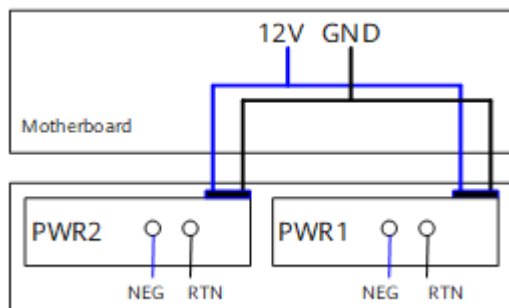
The S5720-28X-SI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

**NOTE**

If a 60 W power module and a 150 W power module is used in the same switch, the maximum output power of the 150 W power module is 60 W.

**Figure 4-192** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-192** Power supply connections of dual DC power modules



NEG: negative wire

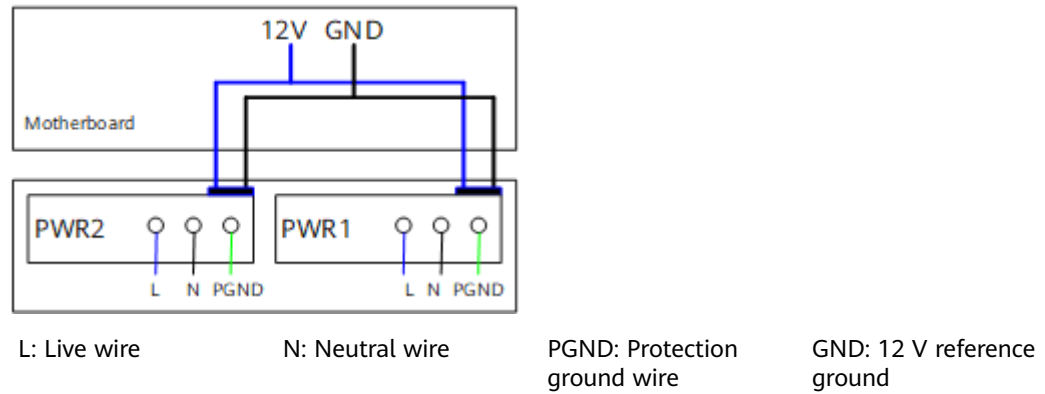
RTN: positive wire

GND: 12 V reference ground

**Figure 4-193** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

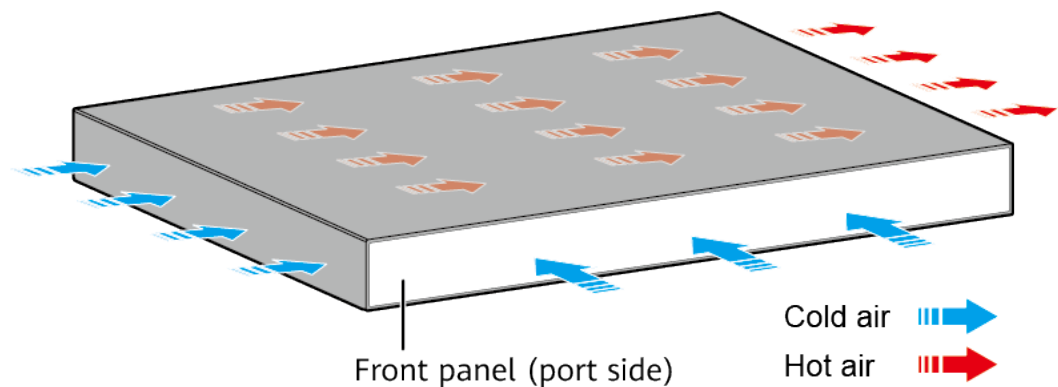


**Figure 4-193** Power supply connections of dual AC power modules



## Heat Dissipation

The S5720-28X-SI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-507** lists technical specifications of the S5720-28X-SI-AC.

**Table 4-507** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	82.4 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	9.1 kg (20.06 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	37.5 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	22.3 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 52 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350DLT

## 4.11.5 S5720-28X-SI-DC

### Version Mapping

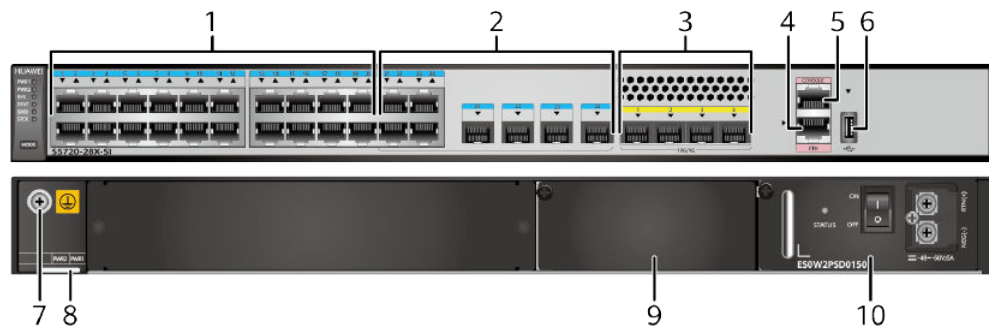
[Table 4-508](#) lists the mapping between the S5720-28X-SI-DC chassis and software versions.

**Table 4-508** Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-28X-SI-DC	V200R009C00 to V200R019C10 versions

### Appearance and Structure

**Figure 4-194** S5720-28X-SI-DC appearance



1	Twenty 10/100/1000BASE-T ports	2	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	One ETH management port

5	<p>One console port</p> <p><b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	<p>One USB port</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>ESN label</p> <p><b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">60 W AC power module</a> (supported in V200R011C10 and later versions)</li> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	10	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">60 W AC power module</a> (supported in V200R011C10 and later versions)</li> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-509](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-509** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

 NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-510](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-510** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-511](#).

**Table 4-511** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-512](#) describes the attributes of an ETH management port.

**Table 4-512** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.



 NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-28X-SI-DC has similar indicators to those on the S5720-52X-PWR-SI-AC, except that the S5720-28X-SI-DC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

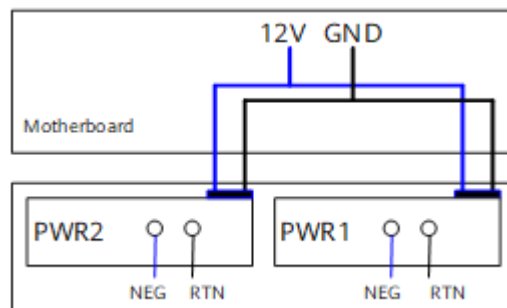
The S5720-28X-SI-DC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

 NOTE

If a 60 W power module and a 150 W power module is used in the same switch, the maximum output power of the 150 W power module is 60 W.

[Figure 4-195](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-195** Power supply connections of dual DC power modules



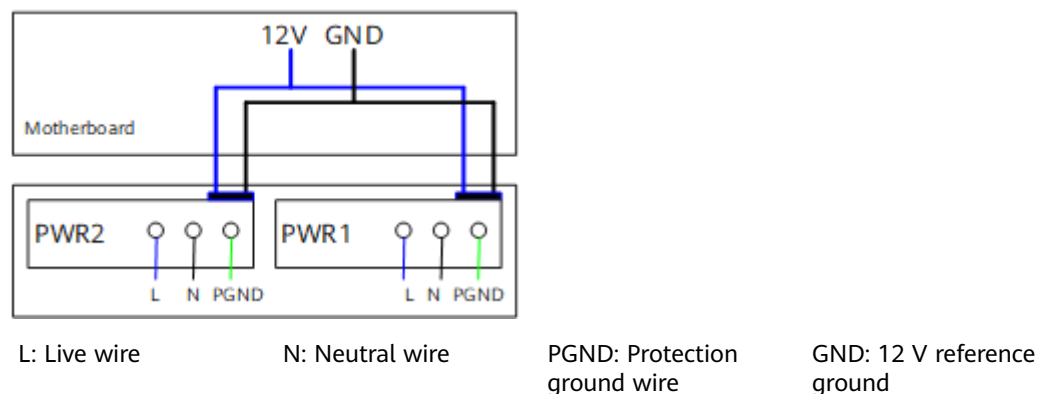
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

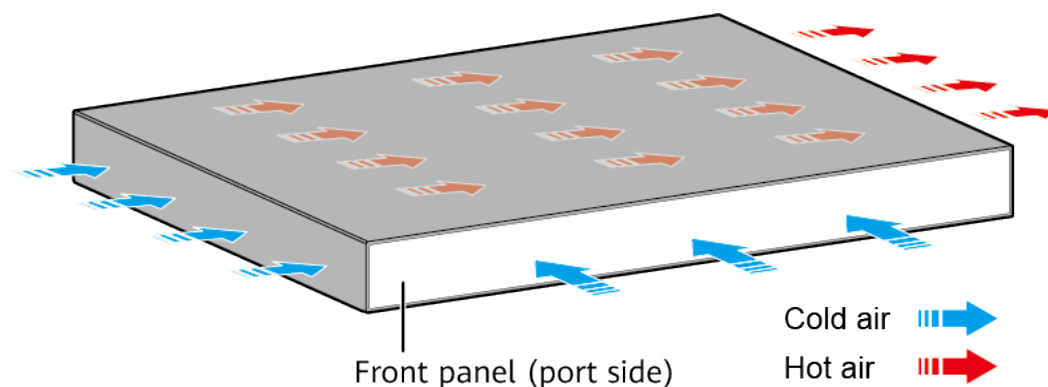
[Figure 4-196](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-196** Power supply connections of dual AC power modules



## Heat Dissipation

The S5720-28X-SI-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-513** lists technical specifications of the S5720-28X-SI-DC.

**Table 4-513** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	82.4 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"><li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li><li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li></ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"><li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li><li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li></ul>
Weight (with packaging)	9.1 kg (20.06 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	36.9 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	22.5 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 52 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350NGU

## 4.11.6 S5720-28X-PWR-SI-AC

### Version Mapping

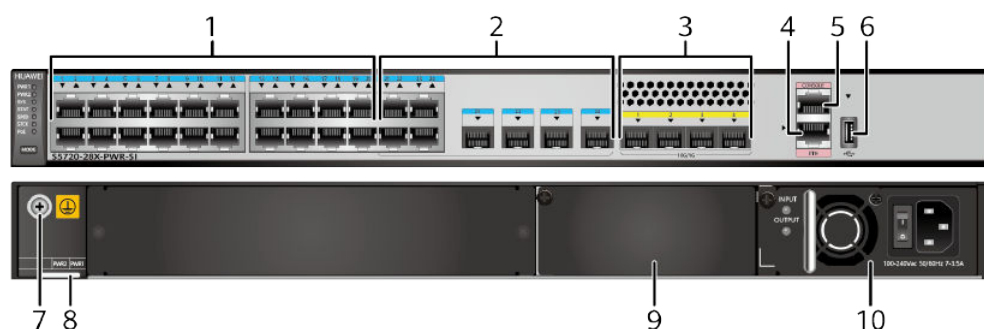
[Table 4-514](#) lists the mapping between the S5720-28X-PWR-SI-AC chassis and software versions.

**Table 4-514** Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-28X-PWR-SI-AC	V200R008C00 to V200R019C10 versions

### Appearance and Structure

**Figure 4-197** S5720-28X-PWR-SI-AC appearance



1	<p>Twenty PoE+ 10/100/1000BASE-T ports</p>	2	<p>Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	<p>One ETH management port</p>

5	One console port <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
9	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> </ul>	10	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-515](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-515** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

**10GE SFP+ port**

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-516](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-516** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

**Console port**

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-517](#).

**Table 4-517** Attributes of a console port

Attribute	Description
Connector type	RJ45



Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-518](#) describes the attributes of an ETH management port.

**Table 4-518** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-28X-PWR-SI-AC has the same types of indicators as the S5720-52X-PWR-SI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-28X-PWR-SI-AC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. [Table 4-519](#) lists its power supply configurations.

**Table 4-519** Power supply configurations

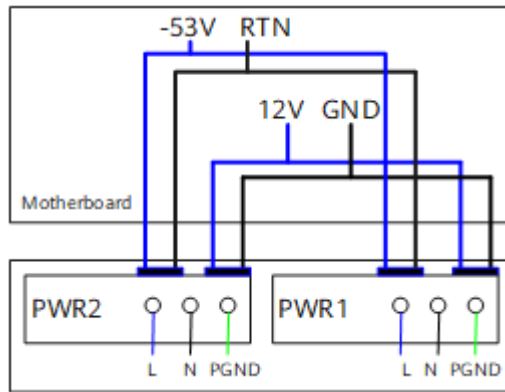
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 24</li><li>802.3at (30 W per port): 12</li></ul>
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 24</li><li>802.3at (30 W per port): 24</li></ul>

 NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 4-198](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

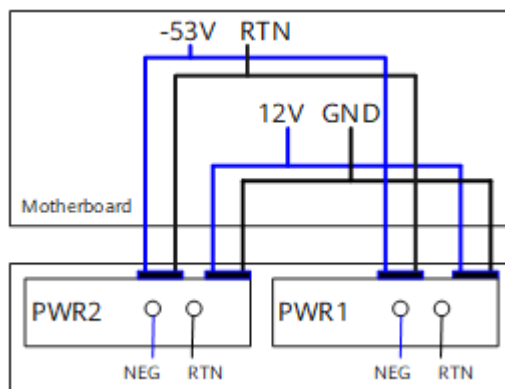
**Figure 4-198** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

**Figure 4-199** shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

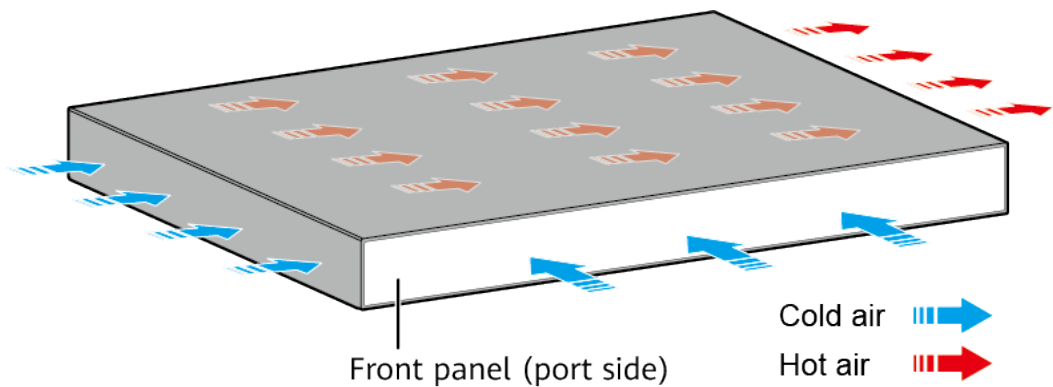
**Figure 4-199** Power supply connections of dual DC PoE power modules



NEG: negative wire      RTN: positive wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5720-28X-PWR-SI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-520** lists technical specifications of the S5720-28X-PWR-SI-AC.

**Table 4-520** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	66.78 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using 500 W AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using 650 W DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>

Item	Description
Weight (with packaging)	9.3 kg (20.51 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>• Not providing the PoE function: 56.1 W</li> <li>• 100% PoE loads: 913 W (system power consumption: 173 W, PoE: 740 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	31.8 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 56.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350DLW

## 4.11.7 S5720-28X-PWR-SI-DC

### Version Mapping

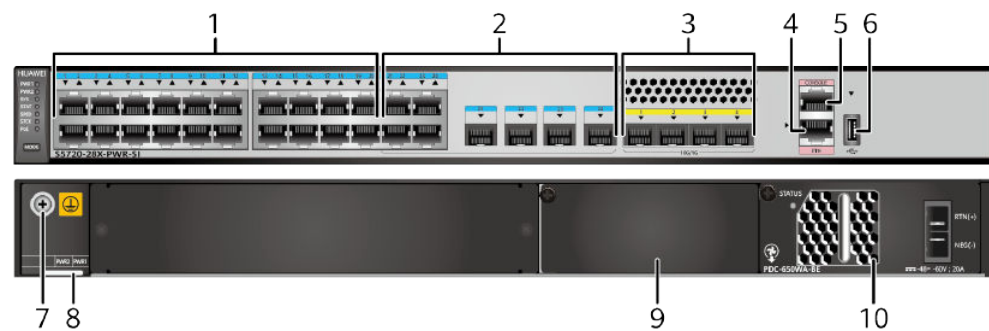
**Table 4-521** lists the mapping between the S5720-28X-PWR-SI-DC chassis and software versions.

**Table 4-521** Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-28X-PWR-SI-DC	V200R009C00 to V200R019C10 versions

## Appearance and Structure

**Figure 4-200** S5720-28X-PWR-SI-DC appearance



1	Twenty PoE+ 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>● FE optical module</li> <li>● GE optical module</li> <li>● GE-CWDM optical module</li> <li>● GE-DWDM optical module</li> </ul>
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b> If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	<p>One ETH management port</p>
5	<p>One console port</p> <p><b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	<p>One USB port</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	8	<p>ESN label</p> <p><b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.</p>



9	Power module slot 2  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> </ul>	1 0	Power module slot 1  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> </ul>
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-522](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-522** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

 NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-523](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-523** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-524](#).

**Table 4-524** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-525](#) describes the attributes of an ETH management port.

**Table 4-525** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-28X-PWR-SI-DC has the same types of indicators as the S5720-52X-PWR-SI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-28X-PWR-SI-DC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. [Table 4-526](#) lists its power supply configurations.

**Table 4-526** Power supply configurations

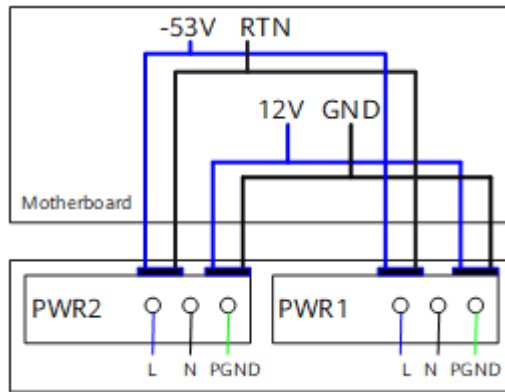
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 24</li><li>802.3at (30 W per port): 12</li></ul>
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 24</li><li>802.3at (30 W per port): 24</li></ul>

 NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 4-201](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

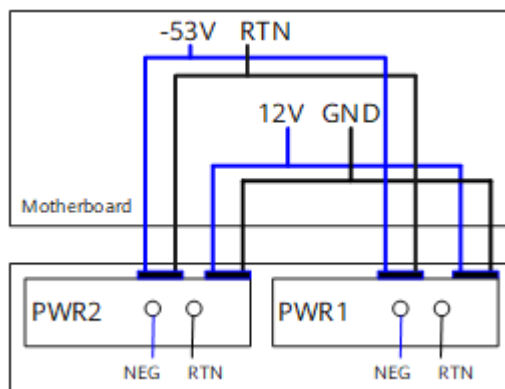
**Figure 4-201** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

**Figure 4-202** shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

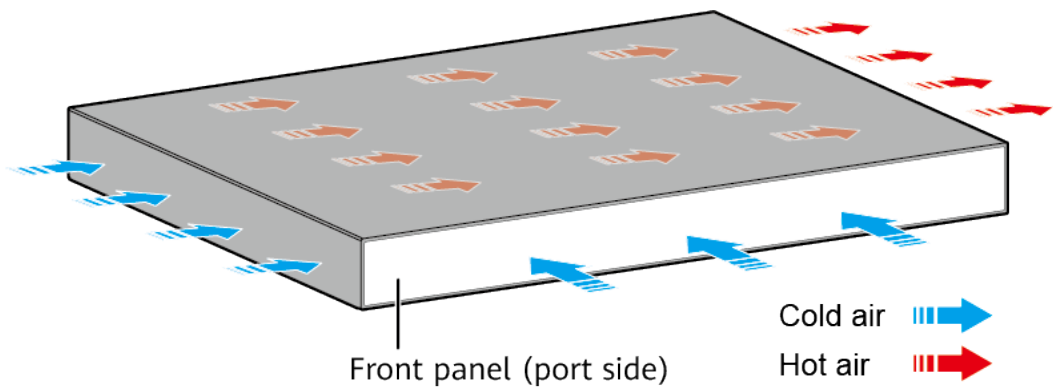
**Figure 4-202** Power supply connections of dual DC PoE power modules



NEG: negative wire      RTN: positive wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5720-28X-PWR-SI-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-527](#) lists technical specifications of the S5720-28X-PWR-SI-DC.

**Table 4-527** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	66.78 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using 500 W AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using 650 W DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>

Item	Description
Weight (with packaging)	9.3 kg (20.51 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>• Not providing the PoE function: 56.3 W</li> <li>• 100% PoE loads: 887 W (system power consumption: 147 W, PoE: 740 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	32.6 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b>                      When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 56.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350NGW

## 4.11.8 S5720-28X-SI-24S-AC

### Version Mapping

[Table 4-528](#) lists the mapping between the S5720-28X-SI-24S-AC chassis and software versions.

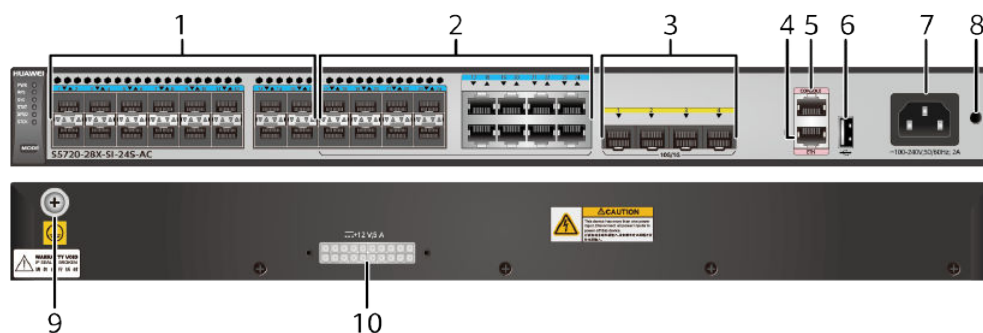


**Table 4-528** Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-28X-SI-24S-AC	V200R010C00 to V200R019C10 versions

## Appearance and Structure

**Figure 4-203** S5720-28X-SI-24S-AC appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions)</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> </ul>	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions)</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b> If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	One ETH management port
5	<p>One console port</p> <p><b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>AC socket</p> <p><b>NOTE</b> It is used with an <b>AC power cable</b>.</p>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b> The AC power cable locking strap is not delivered with the switch.</p>
9	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	10	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <b>RPS cable</b>, which is not hot swappable.</p>

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-529](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-529** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-530](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-530** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-531](#).

**Table 4-531** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-532](#) describes the attributes of an ETH management port.

**Table 4-532** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

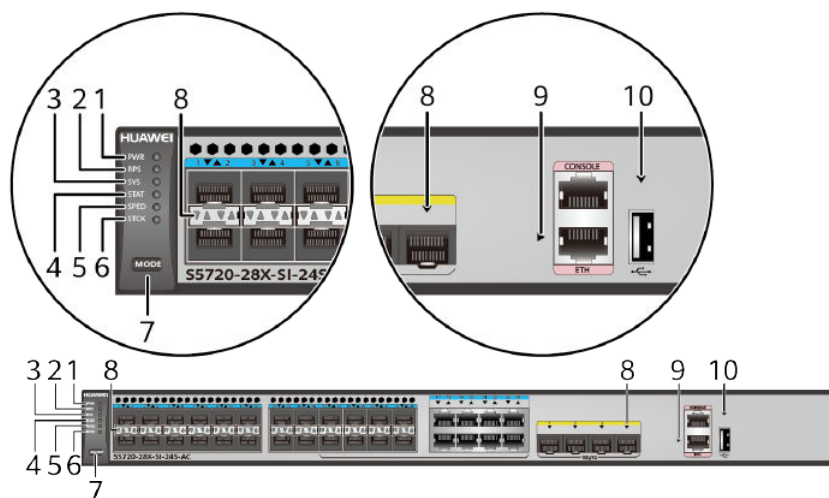
## Indicator Description

#### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-204** Indicators on the S5720-28X-SI-24S-AC



**NOTE**

The S5720-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, and STCK) are used as fault indicators of a switch. If the switch fails, its SYS indicator and mode indicators can be configured to blink red fast so that field maintenance personnel can find this faulty switch.

**Table 4-533** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
			Yellow	Steady on	The built-in power module has failed, and the switch is receiving power from a redundant power supply (RPS).
2	RPS	RPS indicator	-	Off	The switch is not connected to an RPS.
			Green	Steady on	The RPS is in cold standby state.
			Green	Blinking	The RPS is supplying power to another switch.
			Yellow	Blinking	The RPS is supplying power to the local switch, and the built-in power module of the switch has failed.

No.	Indicator	Name	Color	Status	Description
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-534</a> and <a href="#">Table 4-535</a> .		
9	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.



No.	Indicator	Name	Color	Status	Description
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-534** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>

Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

**Table 4-535** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>

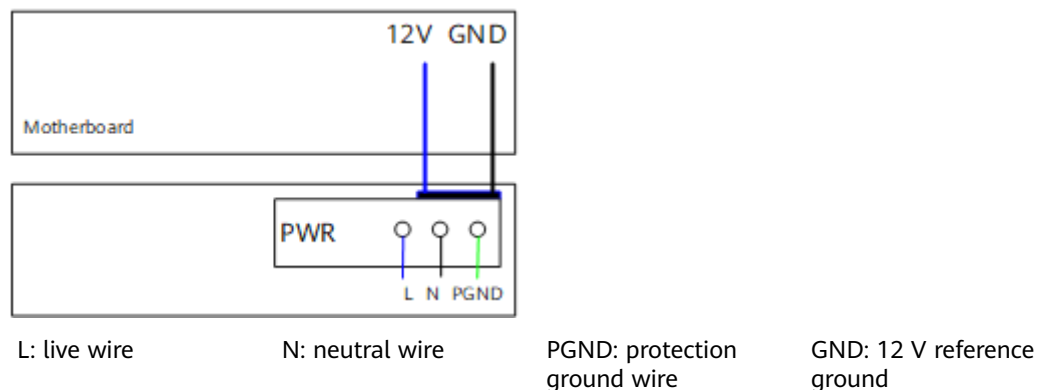
Display Mode	Color	Status	Description
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5720-28X-SI-24S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

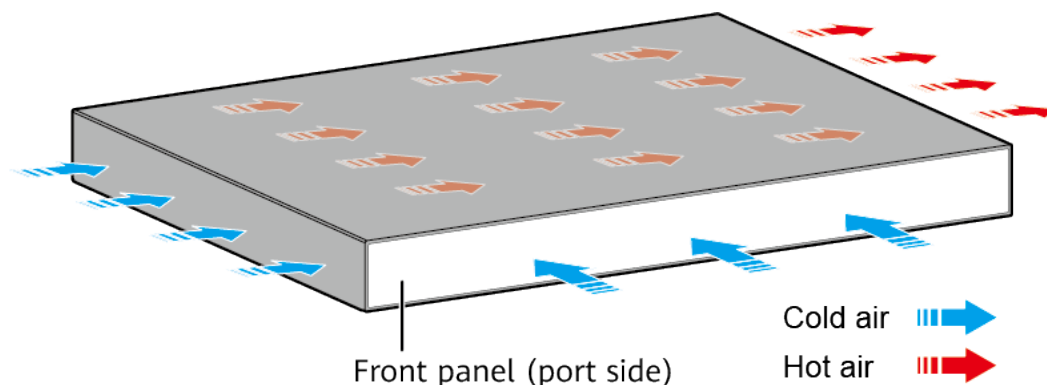
**Figure 4-205** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-205** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720-28X-SI-24S-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-536** lists technical specifications of the S5720-28X-SI-24S-AC.

**Table 4-536** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)</li> </ul>
Weight (with packaging)	4.1 kg (9.04 lb)
Stack ports	GE SFP optical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	41.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"><li>• Tested according to ATIS standard</li><li>• EEE enabled</li><li>• No PoE power consumption</li></ul>	28.9 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"><li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li><li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li><li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li></ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 43 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010625

## 4.11.9 S5720-28X-SI-24S-DC

### Version Mapping

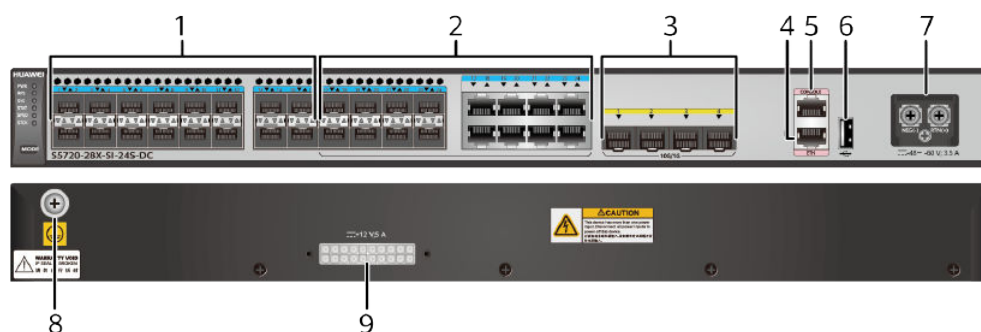
[Table 4-537](#) lists the mapping between the S5720-28X-SI-24S-DC chassis and software versions.

**Table 4-537** Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-28X-SI-24S-DC	V200R010C00 to V200R019C10 versions

### Appearance and Structure

**Figure 4-206** S5720-28X-SI-24S-DC appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions)</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> </ul>	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions)</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	<p>One ETH management port</p>

5	One console port <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	DC power terminal <b>NOTE</b> It is used together with a <b>DC Power Cable</b> .	8	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .
9	RPS socket <b>NOTE</b> It is used with an <b>RPS cable</b> , which is not hot swappable.	-	-

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-538](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-538** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.



 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

**10GE SFP+ port**

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-539](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-539** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

**Console port**

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-540](#).

**Table 4-540** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-541](#) describes the attributes of an ETH management port.

**Table 4-541** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

**NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

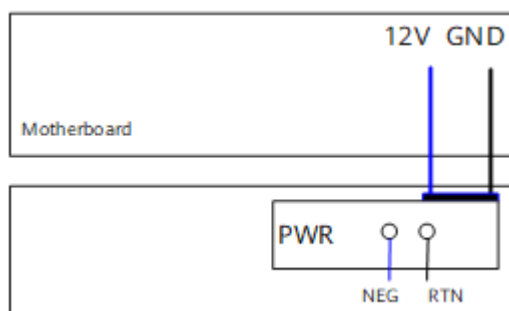
The S5720-28X-SI-24S-DC has the same types of indicators as the S5720-28X-SI-24S-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-28X-SI-24S-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 4-207](#) shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

**Figure 4-207** Power supply by a single DC power module



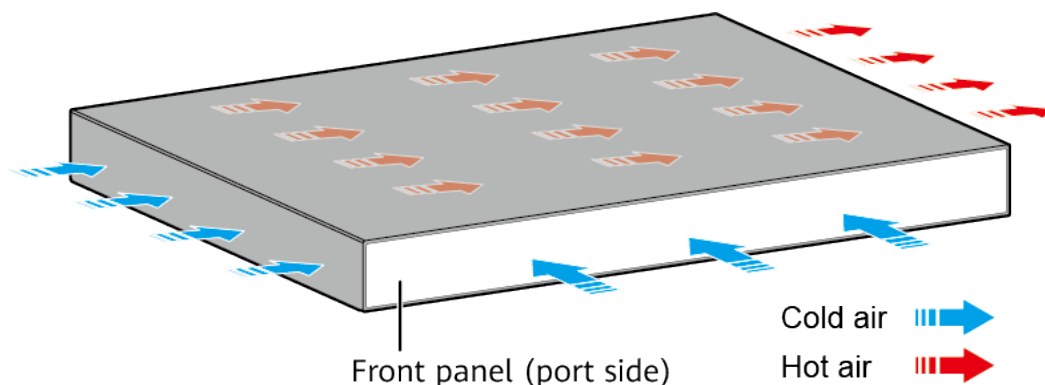
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

## Heat Dissipation

The S5720-28X-SI-24S-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-542** lists technical specifications of the S5720-28X-SI-24S-DC.

**Table 4-542** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 1$ kV in differential mode, $\pm 2$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.8 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 233.8 mm (1.72 in. x 17.4 in. x 9.21 in.)</li> </ul>
Weight (with packaging)	4.1 kg (9.04 lb)
Stack ports	GE SFP optical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	42.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	30.3 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 43 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010626

## 4.11.10 S5721-28X-SI-24S-AC

### Version Mapping

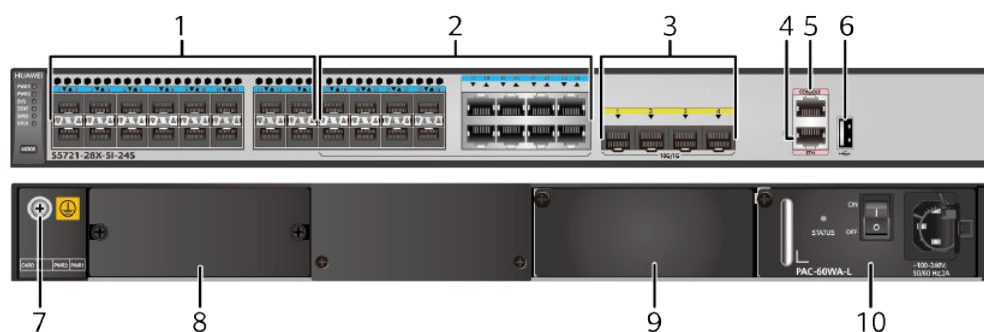
**Table 4-543** lists the mapping between the S5721-28X-SI-24S-AC chassis and software versions.

**Table 4-543** Version mapping

Series		Switch Model	Software Version
S5720-SI	S5720-X-SI	S5721-28X-SI-24S-AC	V200R011C10 to V200R019C10 versions

### Appearance and Structure

**Figure 4-208** S5721-28X-SI-24S-AC appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions)</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> </ul>	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions)</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	<p>One ETH management port</p>

5	One console port <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Rear card slot <b>NOTE</b> This slot is reserved for future use.
9	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">60 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	10	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">60 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-544](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-544** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.



 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

**10GE SFP+ port**

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-545](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-545** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

**Console port**

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-546](#).

**Table 4-546** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-547](#) describes the attributes of an ETH management port.

**Table 4-547** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

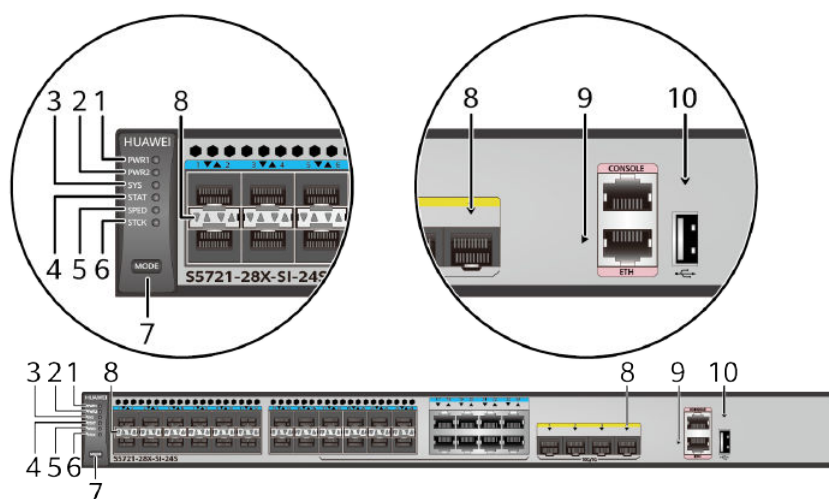
**NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

**Indicator Description****NOTE**

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-209** Indicators on the S5721-28X-SI-24S-AC**NOTE**

The S5720-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, and STCK) are used as fault indicators of a switch. If the switch fails, its SYS indicator and mode indicators can be configured to blink red fast so that field maintenance personnel can find this faulty switch.

**Table 4-548** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-549</a> and <a href="#">Table 4-550</a> .		
9	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.

No.	Indicator	Name	Color	Status	Description
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-549** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>

Display Mode	Color	Status	Description
	Green	Blinking	<p>The switch is the master switch in a stack.</p> <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

**Table 4-550** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	<p>10M/100M/1000M port: The port is operating at 10/100 Mbit/s.</p> <p>100M/1000M port: The port is operating at 100 Mbit/s.</p>
	Green and yellow	Blinking	<p>10M/100M/1000M port: The port is operating at 1000 Mbit/s.</p> <p>100M/1000M port: The port is operating at 1000 Mbit/s.</p>
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	<p>The switch is not the master switch in a stack.</p> <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>



Display Mode	Color	Status	Description
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

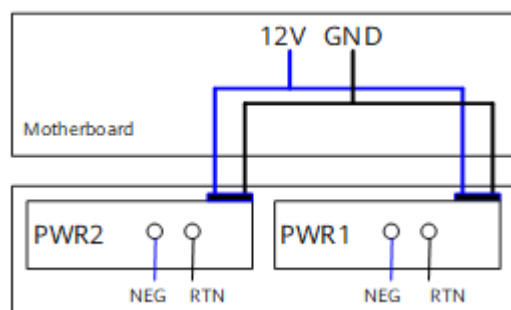
The S5721-28X-SI-24S-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

### NOTE

If a 60 W AC power module and a 150 W DC power module is used in the same switch, the maximum output power of the 150 W DC power module is 60 W.

**Figure 4-210** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-210** Power supply connections of dual DC power modules



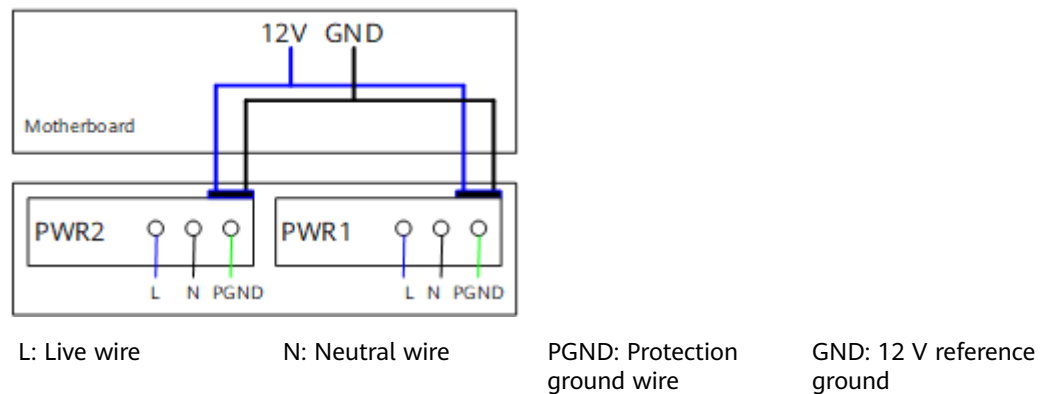
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

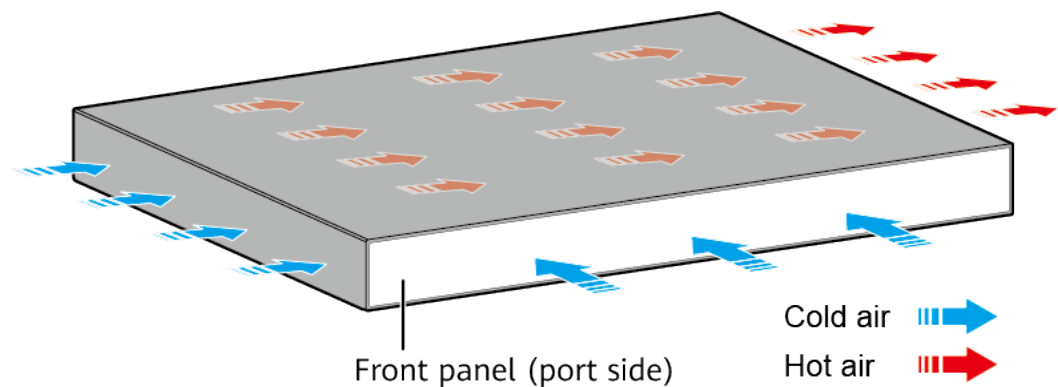
**Figure 4-211** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-211** Power supply connections of dual AC power modules



## Heat Dissipation

The S5721-28X-SI-24S-AC has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-551** lists technical specifications of the S5721-28X-SI-24S-AC.

**Table 4-551** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	36 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"><li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li><li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li></ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"><li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 425.0 mm (1.75 in. x 17.4 in. x 16.73 in.)</li><li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.)</li></ul>
Weight (including package)	8.6 kg (18.96 lb)
Stack ports	GE optical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	41 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	34.5 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010661

## 4.11.11 S5720-52X-SI-AC

### Version Mapping

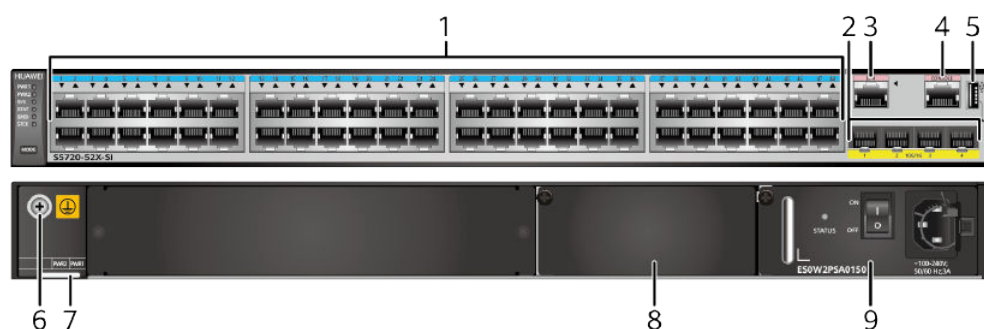
[Table 4-552](#) lists the mapping between the S5720-52X-SI-AC chassis and software versions.

**Table 4-552** Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-52X-SI-AC	V200R008C00 to V200R019C10 versions

### Appearance and Structure

**Figure 4-212** S5720-52X-SI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p><b>NOTE</b></p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>

7	<p>ESN label</p> <p><b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.</p>	8	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <b>60 W AC power module</b> (supported in V200R011C10 and later versions)</li> <li>• <b>150 W AC power module</b></li> <li>• <b>150 W DC power module</b></li> </ul>
9	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <b>60 W AC power module</b> (supported in V200R011C10 and later versions)</li> <li>• <b>150 W AC power module</b></li> <li>• <b>150 W DC power module</b></li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-553](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-553** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-554](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-554** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-555](#).

**Table 4-555** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-556](#) describes the attributes of an ETH management port.

**Table 4-556** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45



Attribute	Description
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-52X-SI-AC has similar indicators to those on the S5720-52X-PWR-SI-AC, except that the S5720-52X-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

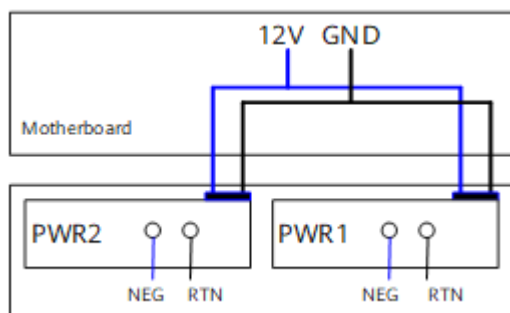
The S5720-52X-SI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

#### NOTE

If a 60 W power module and a 150 W power module is used in the same switch, the maximum output power of the 150 W power module is 60 W.

**Figure 4-213** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-213** Power supply connections of dual DC power modules



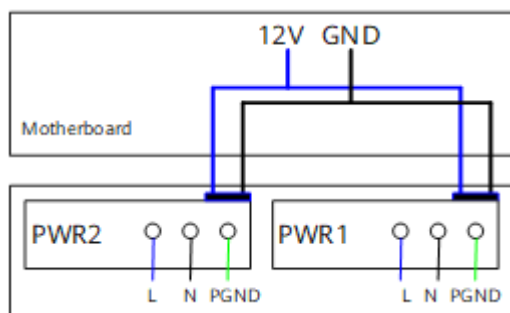
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

**Figure 4-214** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-214** Power supply connections of dual AC power modules



L: Live wire

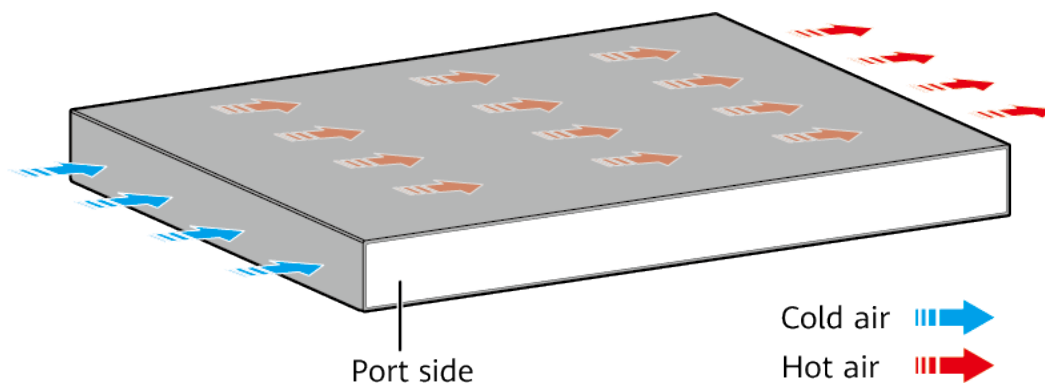
N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

## Heat Dissipation

The S5720-52X-SI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-557** lists technical specifications of the S5720-52X-SI-AC.

**Table 4-557** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	73.23 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	9.5 kg (20.95 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	56.8 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	33.8 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 52 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	02350DLV

## 4.11.12 S5720-52X-SI-DC

### Version Mapping

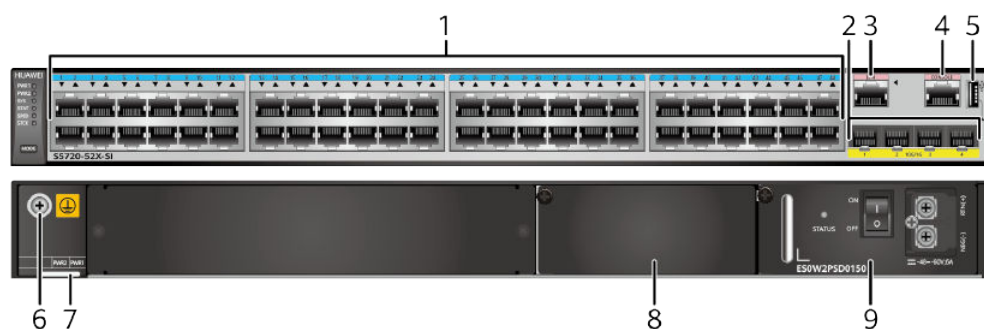
**Table 4-558** lists the mapping between the S5720-52X-SI-DC chassis and software versions.

**Table 4-558** Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-52X-SI-DC	V200R009C00 to V200R019C10 versions

### Appearance and Structure

**Figure 4-215** S5720-52X-SI-DC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p><b>NOTE</b></p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>

7	<p>ESN label</p> <p><b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.</p>	8	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <b>60 W AC power module</b> (supported in V200R011C10 and later versions)</li> <li>• <b>150 W AC power module</b></li> <li>• <b>150 W DC power module</b></li> </ul>
9	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <b>60 W AC power module</b> (supported in V200R011C10 and later versions)</li> <li>• <b>150 W AC power module</b></li> <li>• <b>150 W DC power module</b></li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-559](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-559** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-560](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-560** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-561](#).

**Table 4-561** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-562](#) describes the attributes of an ETH management port.

**Table 4-562** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45



Attribute	Description
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-52X-SI-DC has similar indicators to those on the S5720-52X-PWR-SI-AC, except that the S5720-52X-SI-DC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

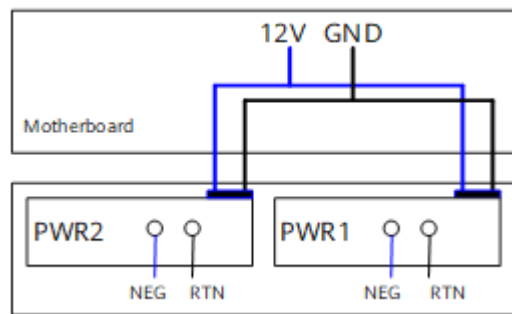
The S5720-52X-SI-DC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

#### NOTE

If a 60 W power module and a 150 W power module is used in the same switch, the maximum output power of the 150 W power module is 60 W.

**Figure 4-216** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-216** Power supply connections of dual DC power modules



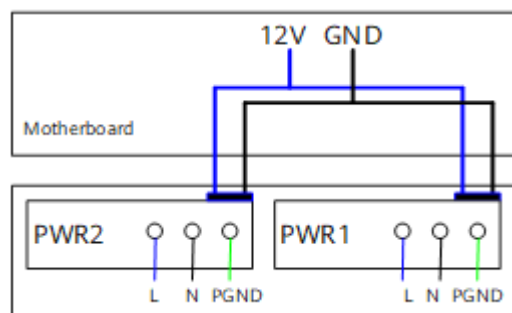
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

**Figure 4-217** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-217** Power supply connections of dual AC power modules



L: Live wire

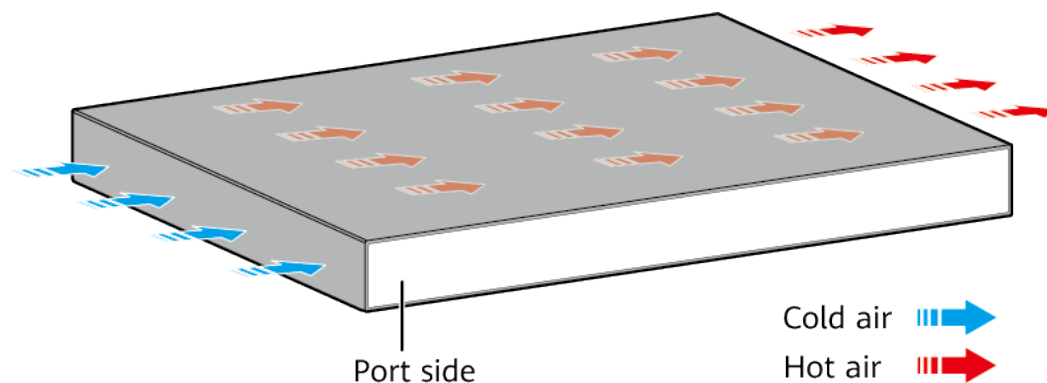
N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

## Heat Dissipation

The S5720-52X-SI-DC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-563** lists technical specifications of the S5720-52X-SI-DC.

**Table 4-563** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	73.23 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	9.5 kg (20.95 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	57.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	34 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 52 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	02350NGV

### 4.11.13 S5720-52X-PWR-SI-AC

#### Version Mapping

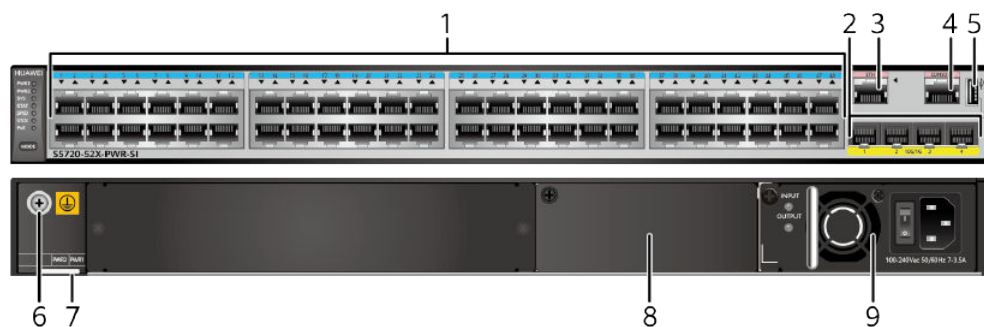
**Table 4-564** lists the mapping between the S5720-52X-PWR-SI-AC chassis and software versions.

**Table 4-564** Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-52X-PWR-SI-AC	V200R008C00 to V200R019C10 versions

#### Appearance and Structure

**Figure 4-218** S5720-52X-PWR-SI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p><b>NOTE</b></p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>

7	<p>ESN label</p> <p><b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.</p>	8	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> </ul>
9	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-565](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-565** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-566](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-566** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-567](#).

**Table 4-567** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-568](#) describes the attributes of an ETH management port.

**Table 4-568** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing



Attribute	Description
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

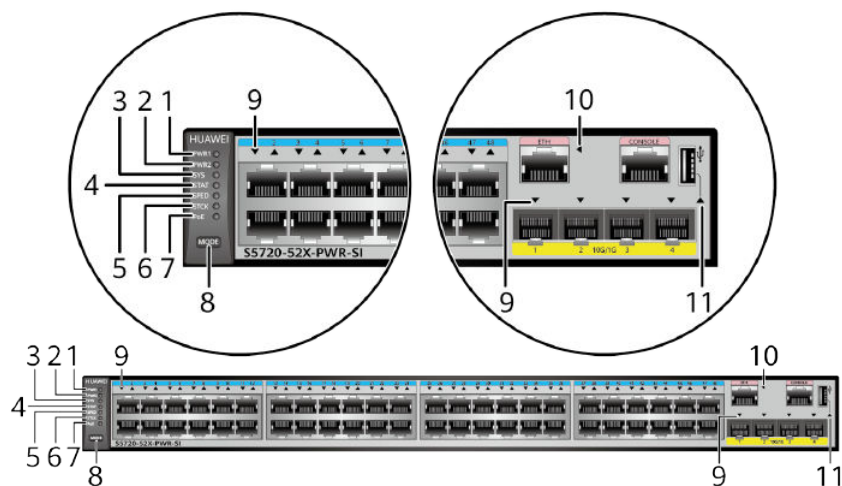
## Indicator Description

#### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-219** Indicators on the S5720-52X-PWR-SI-AC



**NOTE**

The S5720-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5720-SI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

**Table 4-569** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>

No.	Indicator	Name	Color	Status	Description
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Yellow	Blinking	The system is in the sleep state. <b>NOTE</b> The system can wake from the sleeping state if you press the MODE button. Only non-PoE model supports sleep state.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator	Name	Color	Status	Description
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-570</a> .		
10	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
11	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-570** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.

Display Mode	Color	Status	Description
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> <li>The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.</li> <li>The total power consumption of PDs has reached the maximum power of the switch.</li> <li>The manual power management mode is used and the port is not enabled to provide power to the PD.</li> </ul>
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5720-52X-PWR-SI-AC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. [Table 4-571](#) lists its power supply configurations.

**Table 4-571** Power supply configurations

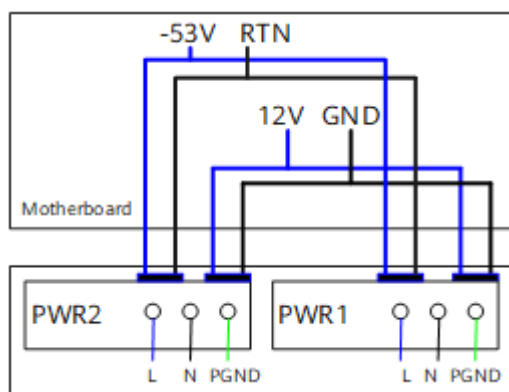
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 24</li> </ul>

**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

**Figure 4-220** shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

**Figure 4-220** Power supply by dual AC PoE power modules

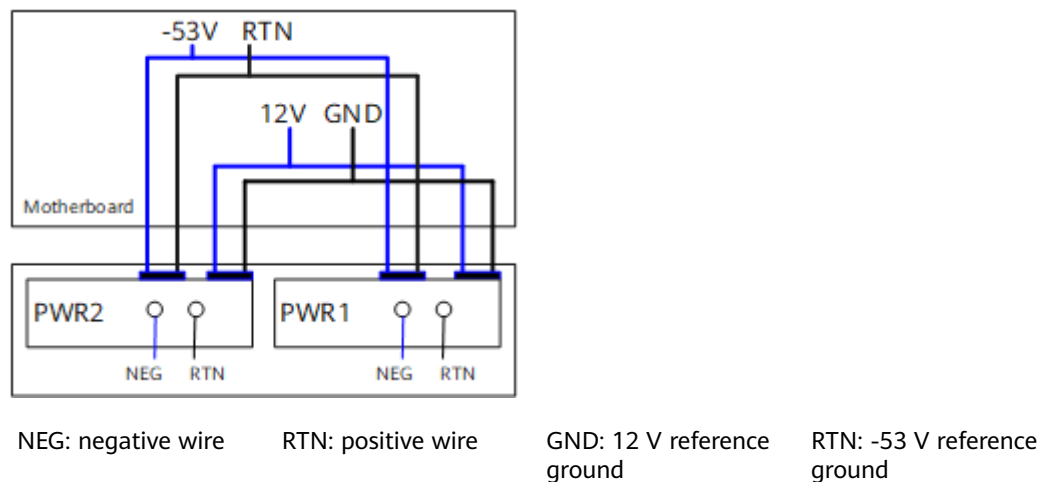


L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

**Figure 4-221** shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

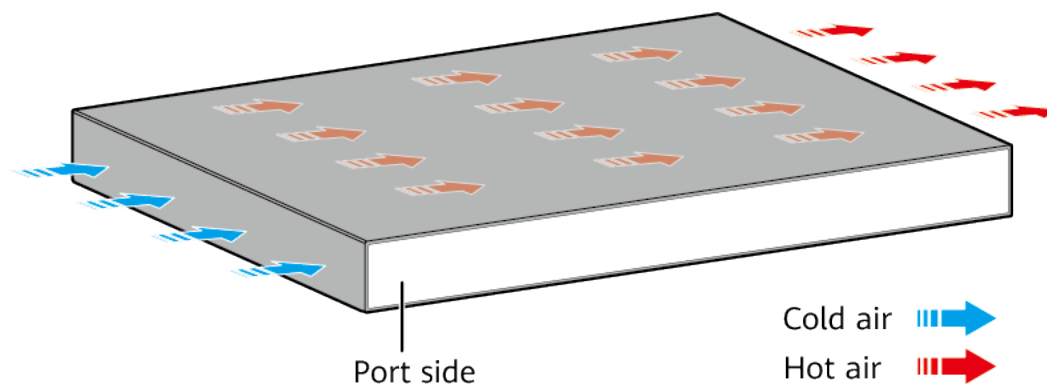


**Figure 4-221** Power supply connections of dual DC PoE power modules



## Heat Dissipation

The S5720-52X-PWR-SI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-572](#) lists technical specifications of the S5720-52X-PWR-SI-AC.

**Table 4-572** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.

Item	Description
Mean time between failures (MTBF)	50.86 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"><li>Using 500 W AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li><li>Using 650 W DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li></ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"><li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li><li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li></ul>
Weight (with packaging)	9.6 kg (21.17 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"><li>Not providing the PoE function: 93.1 W</li><li>100% PoE loads: 943.2 W (system power consumption: 203.2 W, PoE: 740 W)</li></ul>

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	51 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b>                      When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b>                      When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 56.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350DLX

## 4.11.14 S5720-52X-PWR-SI-DC

### Version Mapping

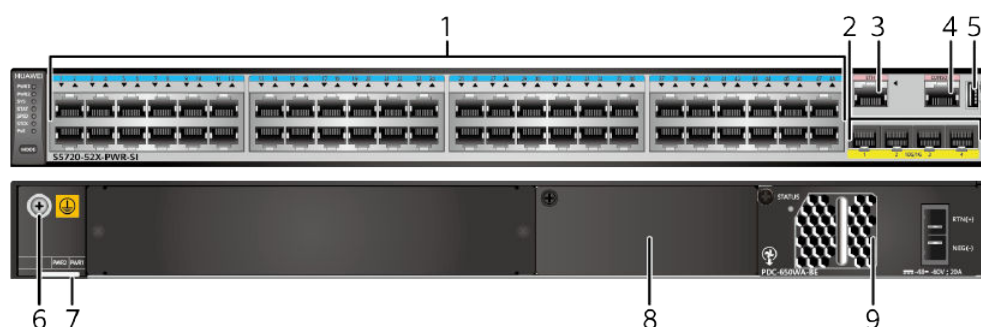
**Table 4-573** lists the mapping between the S5720-52X-PWR-SI-DC chassis and software versions.

**Table 4-573** Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-52X-PWR-SI-DC	V200R009C00 to V200R019C10 versions

### Appearance and Structure

**Figure 4-222** S5720-52X-PWR-SI-DC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p><b>NOTE</b></p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>

7	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.	8	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> </ul>
9	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-574](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-574** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-575](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-575** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-576](#).

**Table 4-576** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-577](#) describes the attributes of an ETH management port.

**Table 4-577** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-52X-PWR-SI-DC has the same types of indicators as the S5720-52X-PWR-SI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-52X-PWR-SI-DC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. [Table 4-578](#) lists its power supply configurations.

**Table 4-578** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>



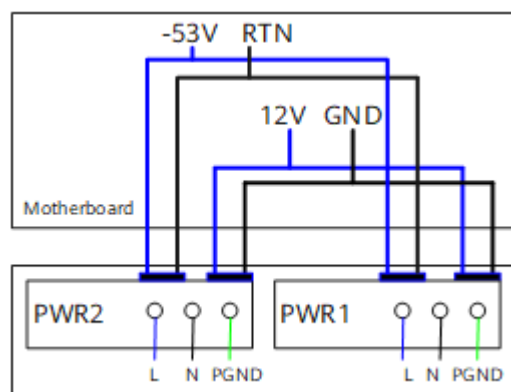
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 24</li> </ul>

**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

**Figure 4-223** shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

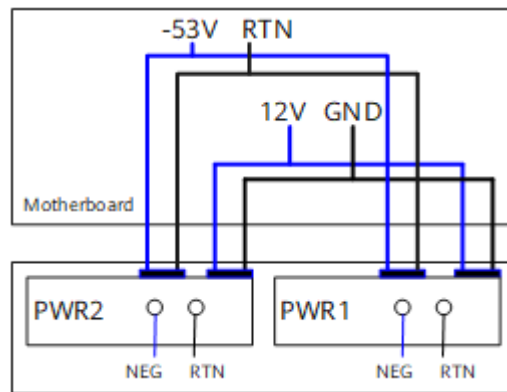
**Figure 4-223** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

**Figure 4-224** shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

**Figure 4-224** Power supply connections of dual DC PoE power modules



NEG: negative wire

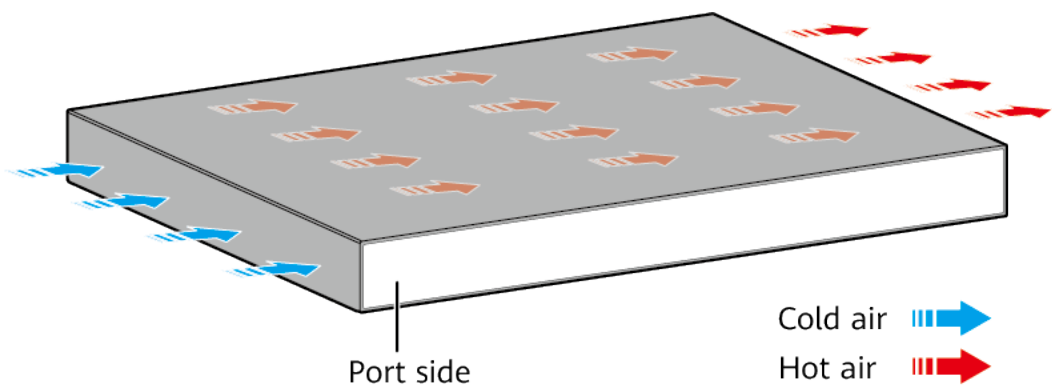
RTN: positive wire

GND: 12 V reference ground

RTN: -53 V reference ground

## Heat Dissipation

The S5720-52X-PWR-SI-DC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-579** lists technical specifications of the S5720-52X-PWR-SI-DC.

**Table 4-579** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.

Item	Description
Mean time between failures (MTBF)	50.86 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using 500 W AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using 650 W DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	9.6 kg (21.17 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 93.1 W</li> <li>100% PoE loads: 943.2 W (system power consumption: 203.2 W, PoE: 740 W)</li> </ul>

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	51 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 56.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350NGX

## 4.11.15 S5720-52X-PWR-SI-ACF

### Version Mapping

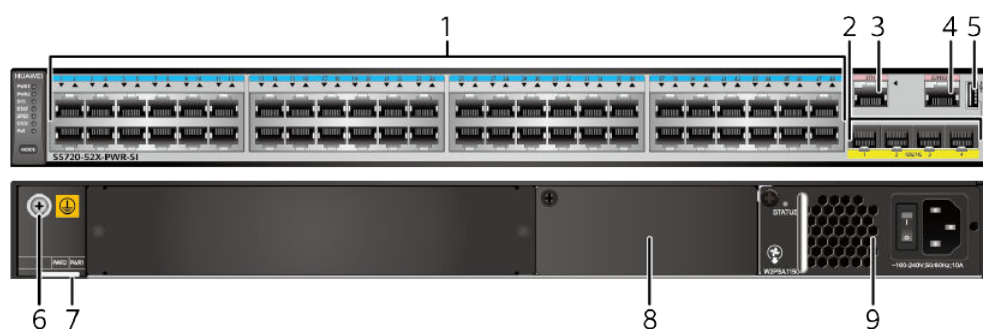
**Table 4-580** lists the mapping between the S5720-52X-PWR-SI-ACF chassis and software versions.

**Table 4-580** Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-52X-PWR-SI-ACF	V200R008C00 to V200R019C10 versions

### Appearance and Structure

**Figure 4-225** S5720-52X-PWR-SI-ACF appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p><b>NOTE</b></p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>

7	<p>ESN label</p> <p><b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.</p>	8	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <b>1150 W AC PoE power module</b></li> <li>• <b>1000 W AC PoE power module</b> (applicable in V200R013C00 and later versions)</li> </ul>
9	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <b>1150 W AC PoE power module</b></li> <li>• <b>1000 W AC PoE power module</b> (applicable in V200R013C00 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 4-581** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-581** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. **Table 4-582** describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-582** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-583](#).

**Table 4-583** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-584](#) describes the attributes of an ETH management port.

**Table 4-584** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing



Attribute	Description
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-52X-PWR-SI-ACF has the same types of indicators as the S5720-52X-PWR-SI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-52X-PWR-SI-ACF is a PoE switch. It has two power module slots and uses 1150 W AC PoE power modules or 1000 W AC PoE power modules (applicable in V200R013C00 and later versions). A 1150 W AC PoE power module and a 1000 W AC PoE power module can be used together. [Table 4-585](#) lists its power supply configurations.

**Table 4-585** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 26</li> </ul>

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 29</li> <li>802.3at (30 W per port): 14</li> </ul>
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 29</li> </ul>
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 25</li> </ul>
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 25</li> </ul>
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 29</li> </ul>

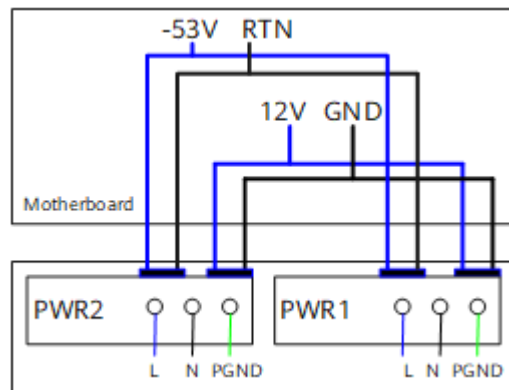
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 29</li> </ul>

**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 4-226 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

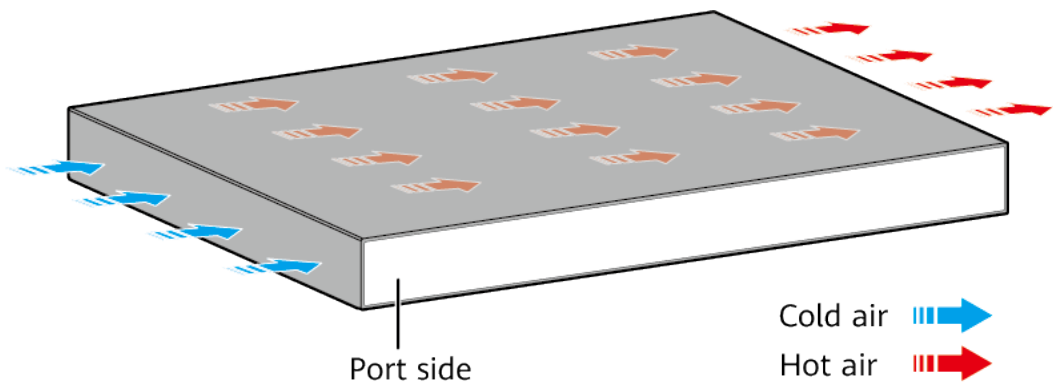
**Figure 4-226** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5720-52X-PWR-SI-ACF has a built-in fan for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-586** lists technical specifications of the S5720-52X-PWR-SI-ACF.

**Table 4-586** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	50.86 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using 1000 W AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using 1150 W AC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 510.5 mm (1.75 in. x 17.4 in. x 20.1 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 541.1 mm (1.75 in. x 17.4 in. x 21.3 in.)</li> </ul>

Item	Description
Weight (with packaging)	10 kg (22.05 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>• Not providing the PoE function: 94.8 W</li> <li>• 100% PoE loads: 1631.5 W (system power consumption: 191.5 W, PoE: 1440 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	57 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 56.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350DLY

## 4.11.16 S5720-52X-SI-48S

### Version Mapping

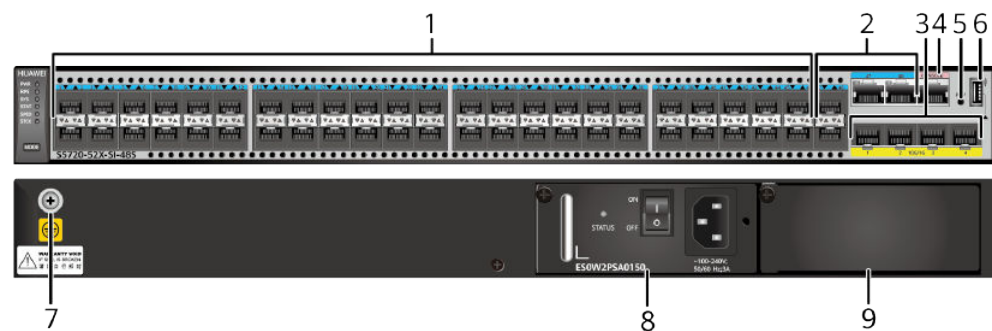
[Table 4-587](#) lists the mapping between the S5720-52X-SI-48S chassis and software versions.

**Table 4-587** Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-52X-SI-48S	V200R013C00 to V200R019C10 versions

## Appearance and Structure

**Figure 4-227** S5720-52X-SI-48S appearance



1	Forty-six 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-CWDM optical module (for OADM scenarios only)</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> </ul>	2	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario)</b></li> </ul>
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ stack cables (only applicable to zero-configuration stacking)</b></li> <li>• <b>H87MMA5671A2 GPON optical module</b></li> </ul> <p><b>NOTE</b> If one port uses a GPON optical module, other ports cannot be used.</p>	4	<p>One console port</p> <p><b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	<p>One PNP button</p> <p><b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>One USB port</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	8	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <b>150 W AC power module</b></li> <li>• <b>150 W DC power module</b></li> </ul>
9	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <b>150 W AC power module</b></li> <li>• <b>150 W DC power module</b></li> </ul>	-	-



## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-588](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-588** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-589](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-589** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-590](#).

**Table 4-590** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

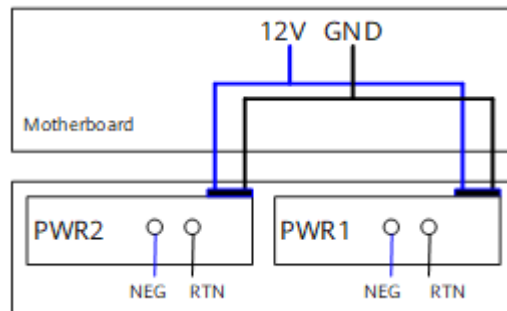
The S5720-52X-SI-48S has similar indicators to those of the S5721-28X-SI-24S-AC, except that the S5720-52X-SI-48S does not have an ETH management port. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-52X-SI-48S uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

**Figure 4-228** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-228** Power supply connections of dual DC power modules



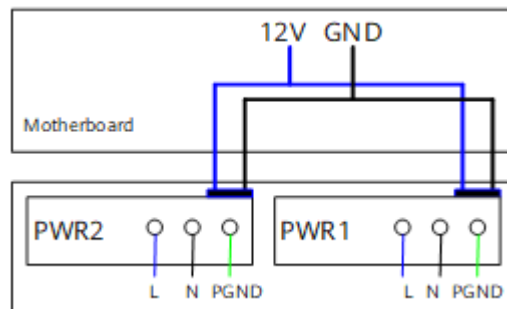
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

**Figure 4-229** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-229** Power supply connections of dual AC power modules



L: Live wire

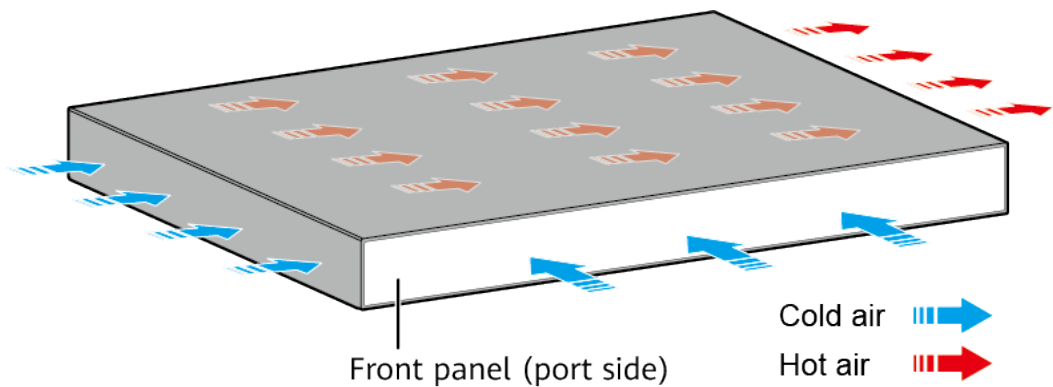
N: Neutral wire

PGND: Protection  
ground wire

GND: 12 V reference  
ground

## Heat Dissipation

The S5720-52X-SI-48S has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-591](#) lists technical specifications of the S5720-52X-SI-48S.

**Table 4-591** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	35.23 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.9 mm (1.75 in. x 17.4 in. x 16.73 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.)</li> </ul>

Item	Description
Weight (with packaging)	8.05 kg (17.75 lb)
Stack ports	GE optical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	85 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"><li>• Tested according to ATIS standard</li><li>• EEE enabled</li><li>• No PoE power consumption</li></ul>	65 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010814

## 4.12 S5720S-SI

### 4.12.1 S5720S-28P-SI-AC

## Version Mapping

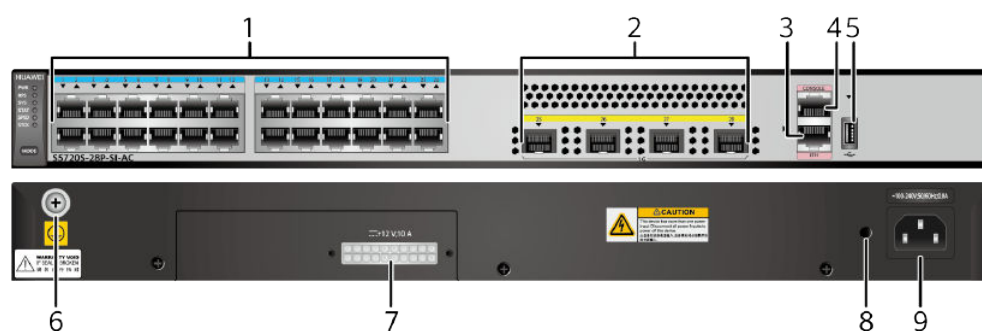
**Table 4-592** lists the mapping between the S5720S-28P-SI-AC chassis and software versions.

**Table 4-592** Version mapping

Series		Model	Software Version
S5720S-SI	S5720S-P-SI	S5720S-28P-SI-AC	V200R008C00 to V200R019C10 versions

## Appearance and Structure

**Figure 4-230** S5720S-28P-SI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (only applicable to stack ports, a maximum transmission distance of 10 km, OSXD22N00 not supported)</b></li> <li>• <b>1 m, 3 m, 10 m SFP+ high-speed copper cables (only applicable to stack ports)</b></li> <li>• <b>5 m SFP+ high-speed copper cable (only for stack ports and applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables (only applicable to stack ports)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p><b>NOTE</b></p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>



7	RPS socket  <b>NOTE</b> It is used with an <a href="#">RPS cable</a> , which is not hot swappable.	8	Jack for AC power cable locking strap  <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket  <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-593](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-593** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. When a 1000BASE-X port uses a 10GE optical module, SFP+ high-speed copper cable, or active optical cable (AOC), the port can only be used for stack connection. [Table 4-594](#) describes the attributes of a 1000BASE-X port.

**Table 4-594** Attributes of a 1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-595](#).

**Table 4-595** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-596](#) describes the attributes of an ETH management port.

**Table 4-596** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

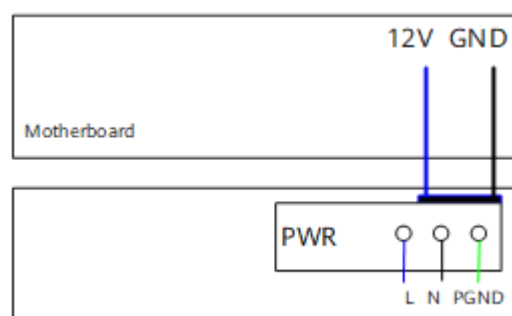
The S5720S-28P-SI-AC has the same types of indicators as the S5720S-52X-SI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720S-28P-SI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 4-231](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-231** Power supply mode of a built-in AC power module



L: live wire

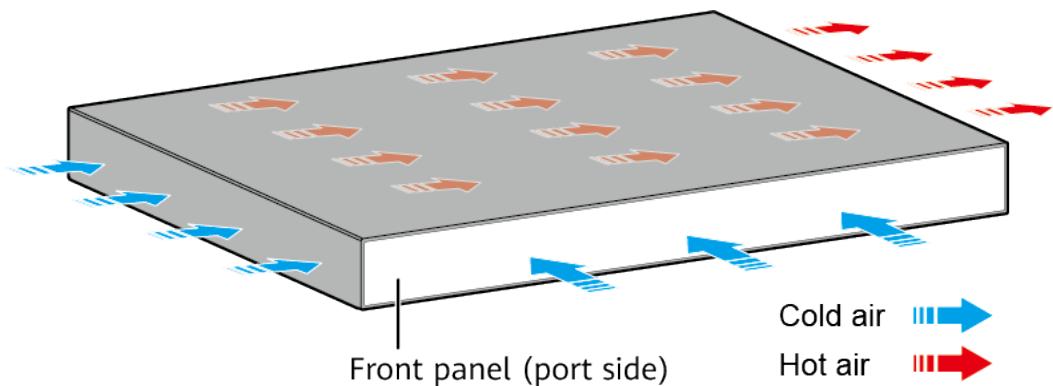
N: neutral wire

PGND: protection  
ground wire

GND: 12 V reference  
ground

## Heat Dissipation

The S5720S-28P-SI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-597](#) lists technical specifications of the S5720S-28P-SI-AC.

**Table 4-597** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	104.92 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)</li> </ul>
Weight (with packaging)	4.8 kg (10.58 lb)
Stack ports	GE electrical ports and GE SFP optical ports on the front panel
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	29.1 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	20.2 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350DLN

## 4.12.2 S5720S-52P-SI-AC

### Version Mapping

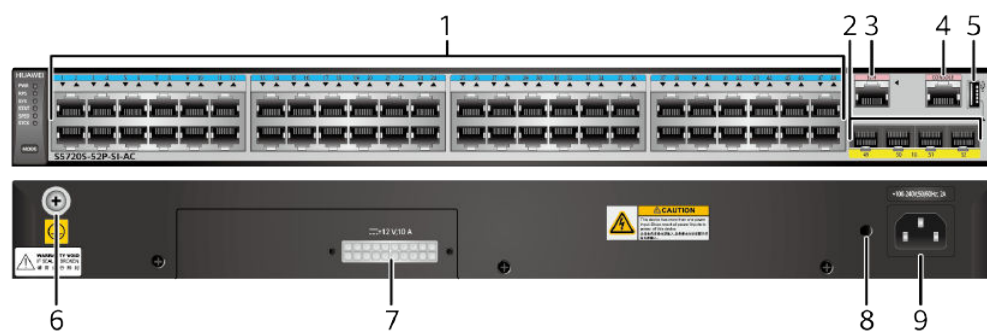
[Table 4-598](#) lists the mapping between the S5720S-52P-SI-AC chassis and software versions.

**Table 4-598** Version mapping

Series		Model	Software Version
S5720S-SI	S5720S-P-SI	S5720S-52P-SI-AC	V200R008C00 to V200R019C10 versions

## Appearance and Structure

**Figure 4-232** S5720S-52P-SI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (only applicable to stack ports, a maximum transmission distance of 10 km, OSXD22N00 not supported)</b></li> <li>• <b>1 m, 3 m, 10 m SFP+ high-speed copper cables (only applicable to stack ports)</b></li> <li>• <b>5 m SFP+ high-speed copper cable (only for stack ports and applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables (only applicable to stack ports)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p><b>NOTE</b></p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>



7	RPS socket  <b>NOTE</b> It is used with an <a href="#">RPS cable</a> , which is not hot swappable.	8	Jack for AC power cable locking strap  <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket  <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-599](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-599** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. When a 1000BASE-X port uses a 10GE optical module, SFP+ high-speed copper cable, or active optical cable (AOC), the port can only be used for stack connection. [Table 4-600](#) describes the attributes of a 1000BASE-X port.

**Table 4-600** Attributes of a 1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-601](#).

**Table 4-601** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-602](#) describes the attributes of an ETH management port.

**Table 4-602** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

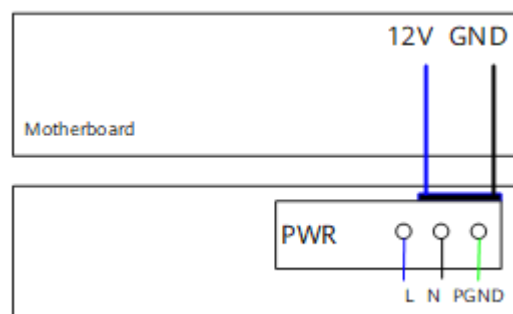
The S5720S-52P-SI-AC has the same types of indicators as the S5720S-52X-SI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720S-52P-SI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

**Figure 4-233** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-233** Power supply mode of a built-in AC power module



L: live wire

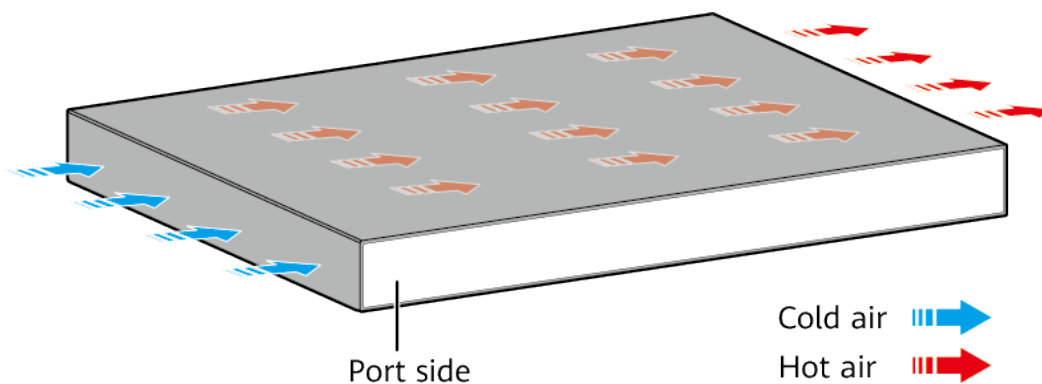
N: neutral wire

PGND: protection  
ground wire

GND: 12 V reference  
ground

## Heat Dissipation

The S5720S-52P-SI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-603](#) lists technical specifications of the S5720S-52P-SI-AC.

**Table 4-603** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	90.07 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)</li> </ul>
Weight (with packaging)	5 kg (11.02 lb)
Stack ports	GE electrical ports and GE SFP optical ports on the front panel
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	51.5 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	33 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350DLQ

### 4.12.3 S5720S-28X-SI-AC

#### Version Mapping

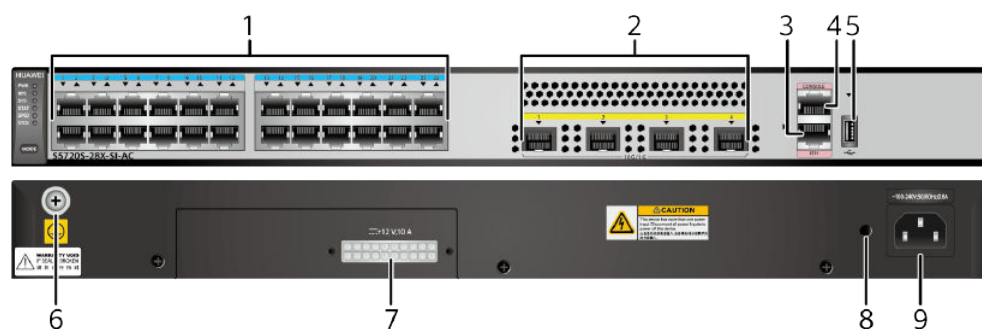
[Table 4-604](#) lists the mapping between the S5720S-28X-SI-AC chassis and software versions.

**Table 4-604** Version mapping

Series		Model	Software Version
S5720S-SI	S5720S-X-SI	S5720S-28X-SI-AC	V200R008C00 to V200R019C10 versions

## Appearance and Structure

**Figure 4-234** S5720S-28X-SI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (a maximum transmission distance of 10 km, OSXD22N00 not supported)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p><b>NOTE</b></p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>



7	RPS socket  <b>NOTE</b> It is used with an <a href="#">RPS cable</a> , which is not hot swappable.	8	Jack for AC power cable locking strap  <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket  <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-605](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-605** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-606](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-606** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-607](#).

**Table 4-607** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-608](#) describes the attributes of an ETH management port.

**Table 4-608** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

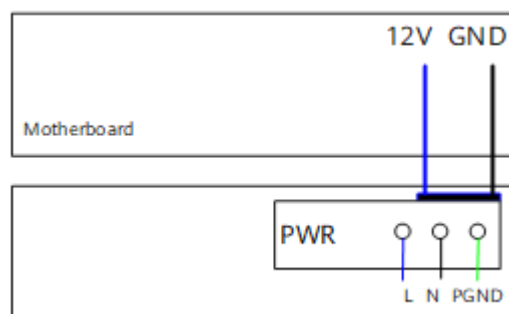
The S5720S-28X-SI-AC has the same types of indicators as the S5720S-52X-SI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720S-28X-SI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 4-235](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-235** Power supply mode of a built-in AC power module



L: live wire

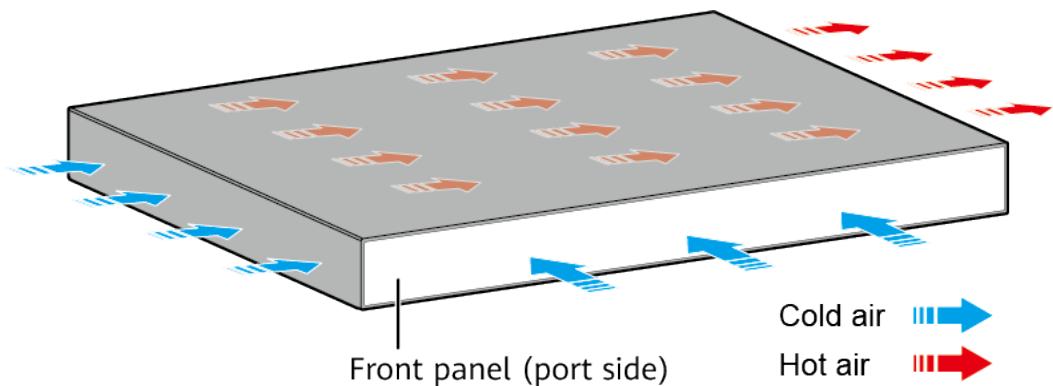
N: neutral wire

PGND: protection  
ground wire

GND: 12 V reference  
ground

## Heat Dissipation

The S5720S-28X-SI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-609](#) lists technical specifications of the S5720S-28X-SI-AC.

**Table 4-609** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	100.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)</li> </ul>
Weight (with packaging)	4.8 kg (10.58 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	32 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	22 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350DLP

## 4.12.4 S5720S-28X-SI-DC

### Version Mapping

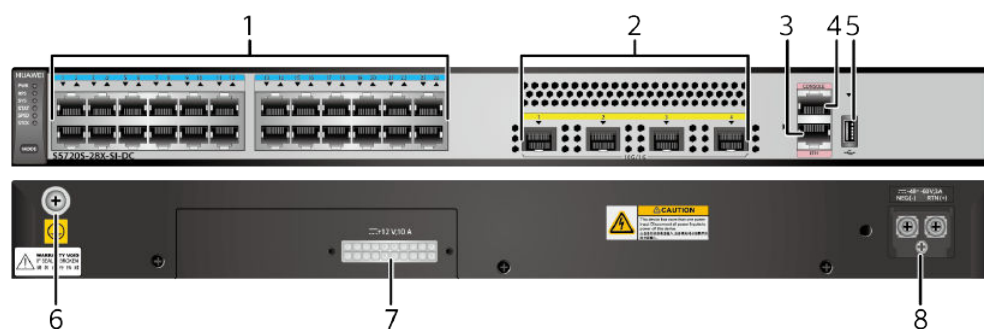
**Table 4-610** lists the mapping between the S5720S-28X-SI-DC chassis and software versions.

**Table 4-610** Version mapping

Series		Model	Software Version
S5720S-SI	S5720S-X-SI	S5720S-28X-SI-DC	V200R009C00 to V200R019C10 versions

## Appearance and Structure

**Figure 4-236** S5720S-28X-SI-DC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (a maximum transmission distance of 10 km, OSXD22N00 not supported)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p><b>NOTE</b></p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>



7	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <a href="#">RPS cable</a>, which is not hot swappable.</p>	8	<p>DC power terminal</p> <p><b>NOTE</b> It is used together with a <a href="#">DC Power Cable</a>.</p>
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-611](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-611** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-612](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-612** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 4-613](#).

**Table 4-613** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-614](#) describes the attributes of an ETH management port.

**Table 4-614** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

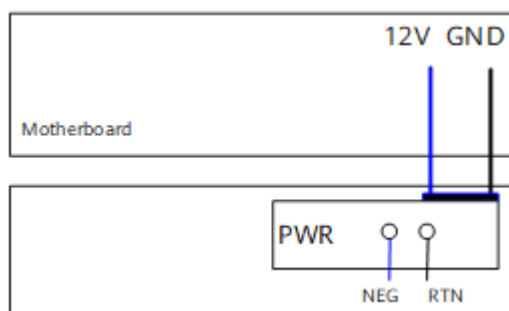
The S5720S-28X-SI-DC has the same types of indicators as the S5720S-52X-SI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720S-28X-SI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

**Figure 4-237** shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

**Figure 4-237** Power supply by a single DC power module



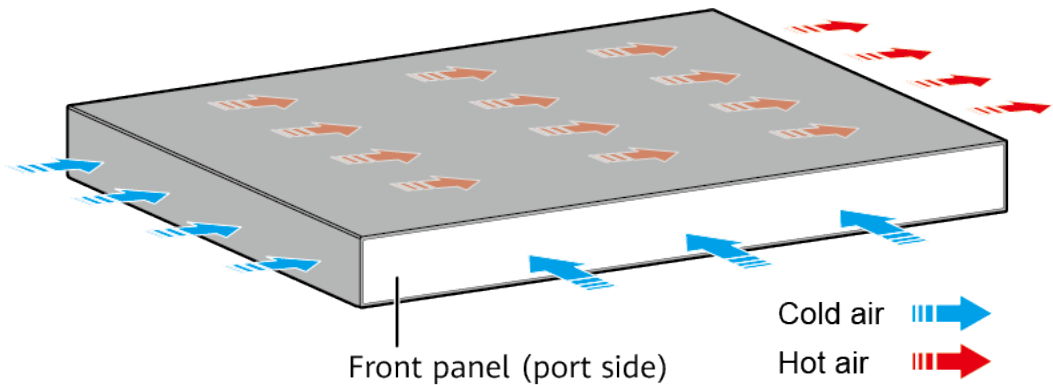
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

## Heat Dissipation

The S5720S-28X-SI-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-615](#) lists technical specifications of the S5720S-28X-SI-DC.

**Table 4-615** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	100.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 1$ kV in differential mode, $\pm 2$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)</li> </ul>
Weight (with packaging)	4.8 kg (10.58 lb)

Item	Description
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	33 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"><li>• Tested according to ATIS standard</li><li>• EEE enabled</li><li>• No PoE power consumption</li></ul>	21.9 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350NGY

## 4.12.5 S5720S-52X-SI-AC

### Version Mapping

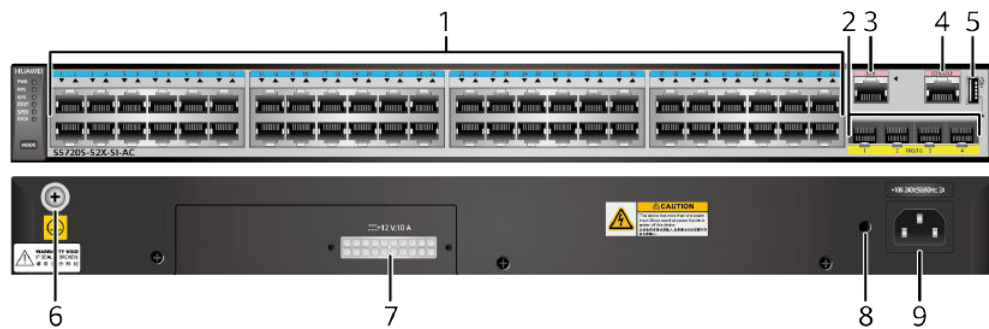
[Table 4-616](#) lists the mapping between the S5720S-52X-SI-AC chassis and software versions.

**Table 4-616** Version mapping

Series		Model	Software Version
S5720S-SI	S5720S-X-SI	S5720S-52X-SI-AC	V200R008C00 to V200R019C10 versions

## Appearance and Structure

**Figure 4-238** S5720S-52X-SI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p><b>NOTE</b></p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>



7	RPS socket  <b>NOTE</b> It is used with an <a href="#">RPS cable</a> , which is not hot swappable.	8	Jack for AC power cable locking strap  <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket  <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-617](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-617** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-618](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-618** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-619](#).

**Table 4-619** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-620](#) describes the attributes of an ETH management port.

**Table 4-620** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

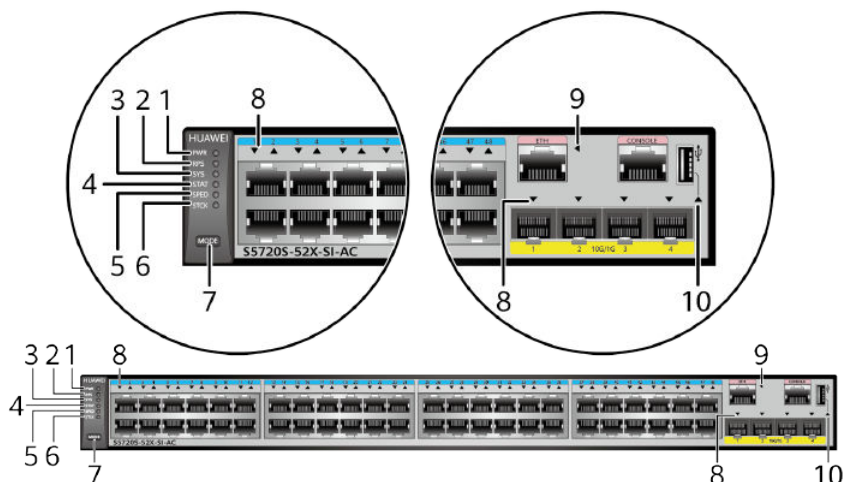
## Indicator Description

#### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-239 Indicators on the S5720S-52X-SI-AC



 **NOTE**

The S5720S-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, and STCK) are used as fault indicators. When an S5720S-SI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

**Table 4-621** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
			Yellow	Steady on	The built-in power module has failed, and the switch is receiving power from a redundant power supply (RPS).
2	RPS	RPS indicator	-	Off	The switch is not connected to an RPS.
			Green	Steady on	The RPS is in cold standby state.
			Green	Blinking	The RPS is supplying power to another switch.
			Yellow	Blinking	The RPS is supplying power to the local switch, and the built-in power module of the switch has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Yellow	Blinking	The system is in the sleep state. <b>NOTE</b> The system can wake from the sleeping state if you press the MODE button.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.

No.	Indicator	Name	Color	Status	Description
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-622</a> .		
9	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.

No.	Indicator	Name	Color	Status	Description
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-622** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>

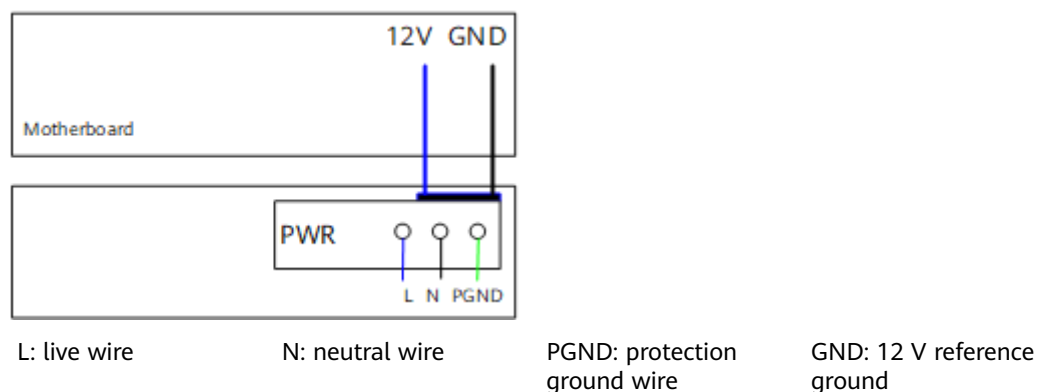
Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5720S-52X-SI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

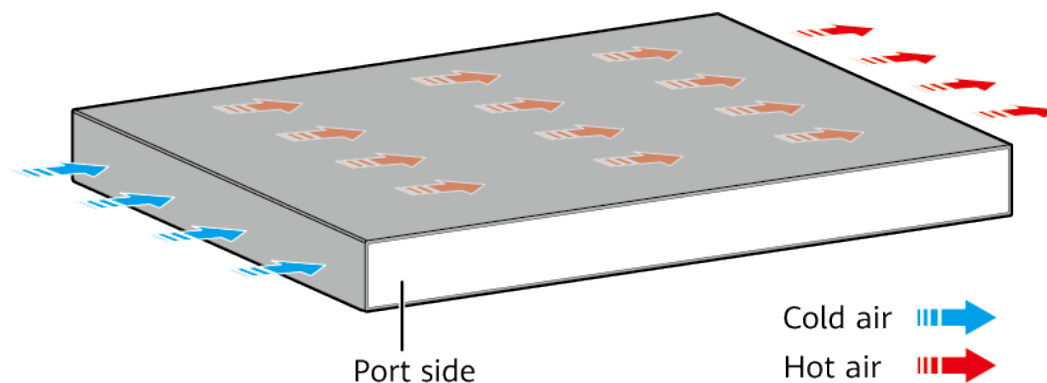
**Figure 4-240** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-240** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720S-52X-SI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.





 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-623** lists technical specifications of the S5720S-52X-SI-AC.

**Table 4-623** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	86.64 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)</li> </ul>
Weight (with packaging)	5 kg (11.02 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	54.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	34.4 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b>                      When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b>                      When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350DLR

## 4.12.6 S5720S-52X-SI-DC

### Version Mapping

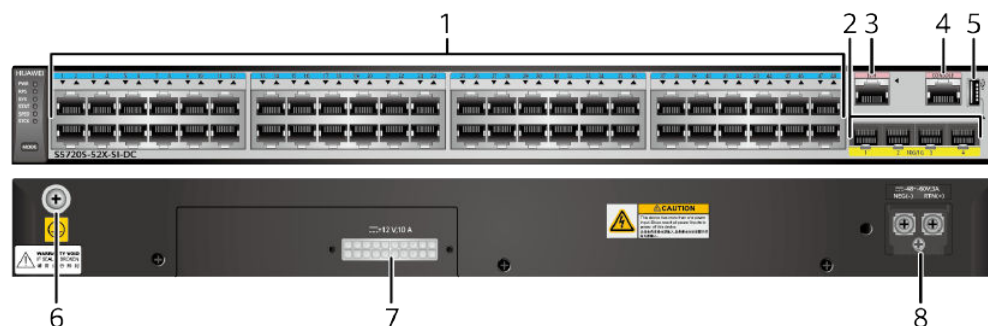
**Table 4-624** lists the mapping between the S5720S-52X-SI-DC chassis and software versions.

**Table 4-624** Version mapping

Series		Model	Software Version
S5720S-SI	S5720S-X-SI	S5720S-52X-SI-DC	V200R009C00 to V200R019C10 versions

### Appearance and Structure

**Figure 4-241** S5720S-52X-SI-DC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> <li>• <b>H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p><b>NOTE</b></p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>

7	RPS socket  <b>NOTE</b> It is used with an <a href="#">RPS cable</a> , which is not hot swappable.	8	DC power terminal  <b>NOTE</b> It is used together with a <a href="#">DC Power Cable</a> .
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-625](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-625** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-626](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-626** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 4-627](#).

**Table 4-627** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-628](#) describes the attributes of an ETH management port.

**Table 4-628** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

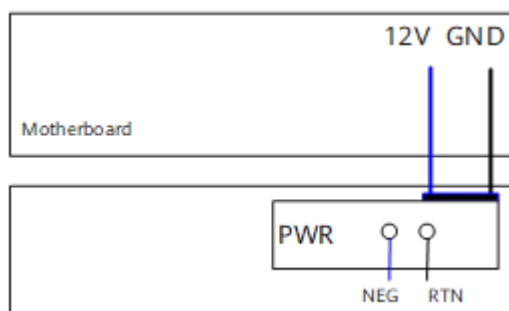
The S5720S-52X-SI-DC has the same types of indicators as the S5720S-52X-SI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720S-52X-SI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

**Figure 4-242** shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

**Figure 4-242** Power supply by a single DC power module



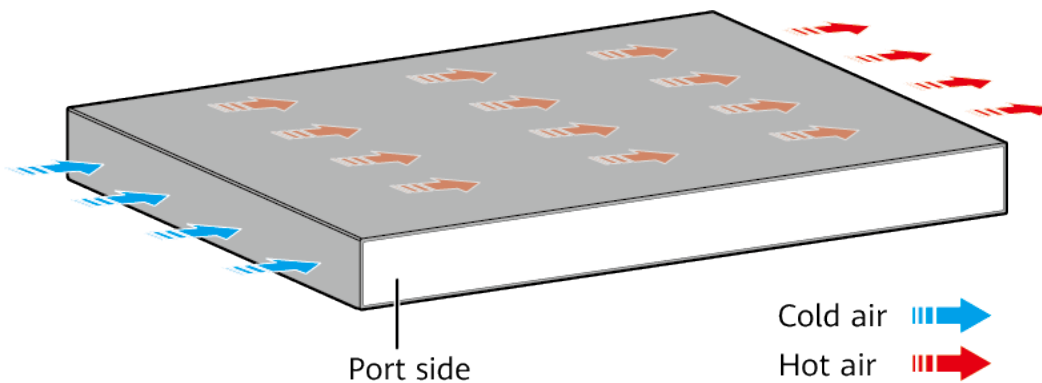
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

## Heat Dissipation

The S5720S-52X-SI-DC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-629** lists technical specifications of the S5720S-52X-SI-DC.

**Table 4-629** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	86.64 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 1$ kV in differential mode, $\pm 2$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)</li> </ul>
Weight (with packaging)	5 kg (11.02 lb)



Item	Description
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	59.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"><li>• Tested according to ATIS standard</li><li>• EEE enabled</li><li>• No PoE power consumption</li></ul>	35.5 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"><li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li><li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li><li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li></ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02350NHA

## 4.13 S5720I-SI

### 4.13.1 S5720I-6X-PWH-SI-AC

## Version Mapping

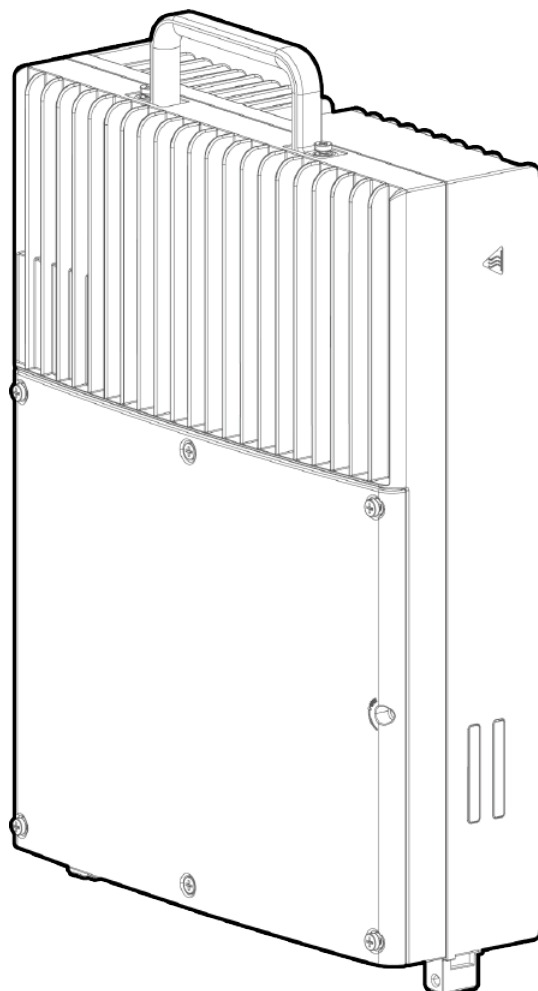
**Table 4-630** lists the mapping between the S5720I-6X-PWH-SI-AC chassis and software versions.

**Table 4-630** Version mapping

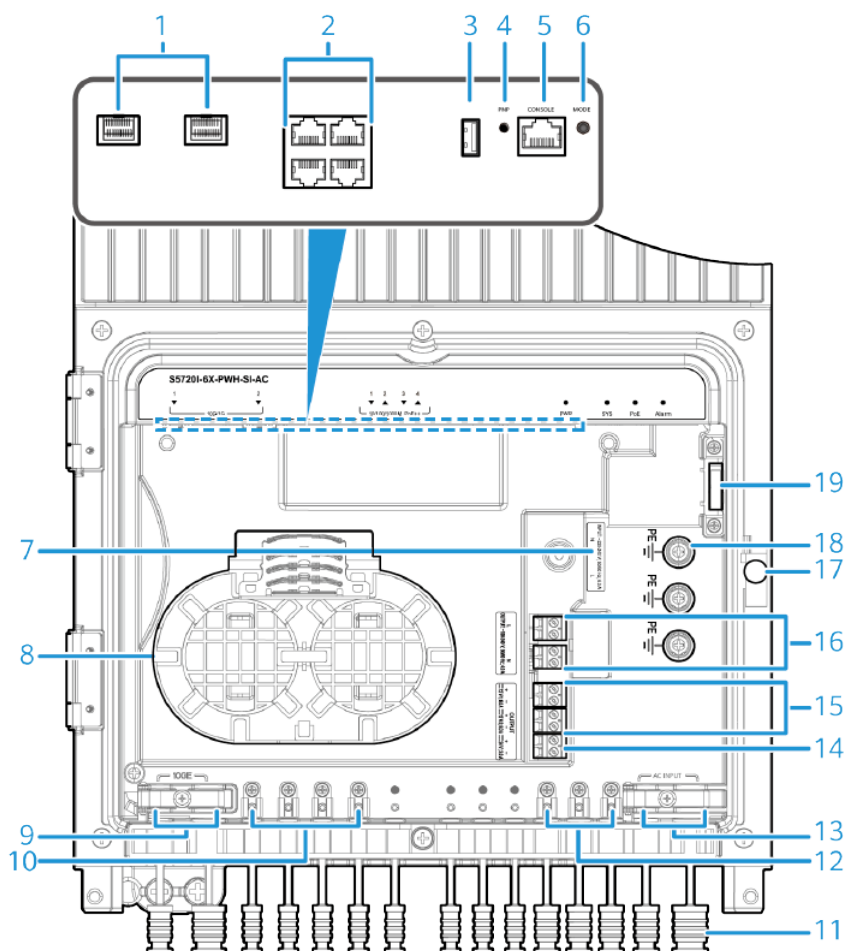
Series	Model	Software Version
S5720I-SI	S5720I-6X-PWH-SI-AC	V200R013C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-243** S5720I-6X-PWH-SI-AC appearance



**Figure 4-244** Interior of the S5720I-6X-PWH-SI-AC maintenance compartment



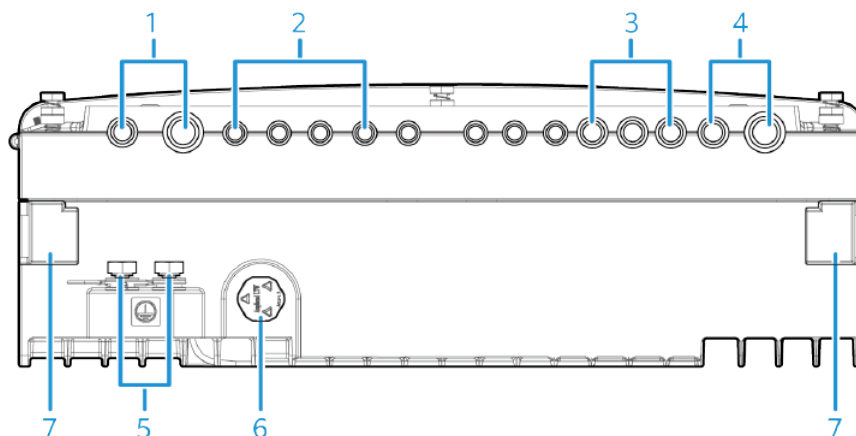
<p>1 Two 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>Industrial optical module</b></li> <li>• <b>GPON optical module</b></li> <li>• Third-party GPON optical modules (Hisense LTE3415-SH+ and CIG G-97S)</li> </ul> <p><b>NOTE</b></p> <p>If one port uses a GPON optical module, the other port cannot be used.</p> <p>The locking bar of an optical port is upward. If an optical module cannot be completely inserted into the optical port, do not force it into the port. Turn the optical module 180 degrees and try again.</p>	<p>2 Four PoE++ 10/100/1000BASE-T ports</p>
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3	One USB port	4	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	<p>MODE button</p> <p><b>NOTE</b></p> <p>The switch supports two indicator modes: status (default mode) and PoE. To change the current indicator mode, press the MODE button.</p> <p>Hold down the MODE button for 6 seconds and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> <li>• If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of the PoE indicator is as follows: <ul style="list-style-type: none"> <li>• If the system enters the web initial login mode successfully, the PoE indicator turns green and stays on for a maximum of 10 minutes.</li> <li>• If the system fails to enter the initial login mode, the PoE indicator fast blinks for 10 seconds and then restores to the default status.</li> </ul> </li> <li>• If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, the PoE indicator fast blinks for 10 seconds, and then returns to the default status.</li> </ul>

7	<p>AC power input socket</p> <p><b>NOTICE</b></p> <p>The external power supply system must be connected to a circuit breaker (20 A is recommended). For safety purposes, do not use a switch without a circuit breaker.</p> <p>An AC power input socket is used with a power connector, which is included in the installation accessory package delivered with the switch. A power cable needs to be connected to the power connector onsite. If no power cable is available, you can purchase one (part number: 25030398) from Huawei.</p>	8	<p>Fiber management tray (FMT)</p> <p><b>NOTE</b></p> <p>The FMT is removable.</p> <p>A maximum of four fused fibers are supported.</p> <p>Maximum length of a fiber that can be coiled up in the FMT: 20 m (for a single bare fiber) or 1 m (for a single fiber pigtail). If two fibers are used, this length is halved.</p>
9	<p>Two optical fiber outlets</p> <p><b>NOTE</b></p> <p>The diameter of optical fibers supported: 8±0.5 mm to 9.6±0.5 mm (on the left outlet) and 13.3±0.5 mm (on the right outlet).</p>	10	<p>Four Ethernet cable outlets</p> <p><b>NOTE</b></p> <p>Cat5e and Cat6 Ethernet cables are supported.</p>
11	<p>Rubber bungs for cable outlets</p> <p><b>NOTE</b></p> <p>Rubber bungs must be inserted into the idle cable outlets.</p>	12	<p>Three DC or AC output power cable outlets</p> <p><b>NOTE</b></p> <p>The diameter of power cables supported by an outlet is 9.3±0.5 mm.</p>
13	<p>Two AC input power cable outlets</p> <p><b>NOTE</b></p> <p>The diameter of power cables supported: 9.5±0.5 mm (on the left outlet) and 14±0.5 mm (on the right outlet).</p>	14	<p>AC power output socket 2</p> <p><b>NOTE</b></p> <p>The switch provides one 24 V AC output to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p> <p>One 24 V AC output provides a maximum of 72 W power.</p>

<p>1 5</p>	<p>DC power output socket</p> <p><b>NOTE</b></p> <p>The switch provides two 12 V DC outputs to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p> <p>Two 12 V DC outputs provide a total of 48 W power. The maximum power of a single output is 48 W.</p> <p>Two 12 V DC outputs and one 24 V AC output share power resources with PoE output. The total shared power is 150 W.</p>	<p>1 6</p>	<p>AC power output socket 1</p> <p><b>NOTICE</b></p> <p>Cables need to be connected to an AC power output socket onsite. Pay attention to the position of the L and N labels, ensuring that the cables are connected in the correct sockets.</p> <p>The switch provides 220 V AC power to external devices, such as strobe lights and non-PoE PTZ dome cameras. The maximum output current is 4 A.</p> <p>The internal 220 V AC power supply is used only for external power conversion. It has no circuit breaker, regulated voltage circuit, or surge protection.</p> <p>The connected devices must provide certain surge protection capabilities. Recommended values are 20 kA in differential mode and 20 kA in common mode.</p>
<p>1 7</p>	<p>Latch of the maintenance compartment</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>You need to use the key provided in the installation accessory package to open the door of the maintenance compartment.</li> <li>After the maintenance compartment door is closed, the latch is automatically locked.</li> </ul>	<p>1 8</p>	<p>PE cable ground terminal</p> <p><b>NOTE</b></p> <p>It is used to ground a PE power cable for 220 V AC input or output.</p>
<p>1 9</p>	<p>Door-opening alarm button</p> <p><b>NOTE</b></p> <p>When the door of the maintenance compartment is opened, a door-opening alarm is reported.</p>	<p>-</p>	<p>-</p>

**Figure 4-245** Bottom of the S5720I-6X-PWH-SI-AC chassis



1	Two optical fiber outlets <b>NOTE</b> The diameter of optical fibers supported: $8\pm 0.5$ mm to $9.6\pm 0.5$ mm (on the left outlet) and $13.3\pm 0.5$ mm (on the right outlet).	2	Four Ethernet cable outlets <b>NOTE</b> Cat5e and Cat6 Ethernet cables are supported.
3	Three DC or AC output power cable outlets <b>NOTE</b> The diameter of power cables supported by an outlet is $9.3\pm 0.5$ mm.	4	Two AC input power cable outlets <b>NOTE</b> The diameter of power cables supported: $9.5\pm 0.5$ mm (on the left outlet) and $14\pm 0.5$ mm (on the right outlet).
5	Ground screw <b>NOTE</b> It is used to ground the switch. The ground cable needs to be purchased separately.	6	Atmospheric pressure valve <b>NOTE</b> It ensures that the atmospheric pressure inside and outside the switch are the same.
7	Mounting column for a cable cover <b>NOTE</b> It is used to mount an optional cable cover.	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-631](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.



**Table 4-631** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	It supports long-distance interconnection with Huawei cameras. For example, it supports the distance of 200 m at 100 Mbit/s and supports the distance of 250 m at 10 Mbit/s. <ul style="list-style-type: none"> <li>The supported camera models are M2220-I, M2221-FL, M2221-VL, M2260-I, and M2220-I(8-32mm).</li> <li>If the transmission distance exceeds 100 m, Category 5E or higher Ethernet cables are required.</li> </ul>

**10GE SFP+ port**

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-632](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-632** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

**Console port**

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-633](#).

**Table 4-633** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

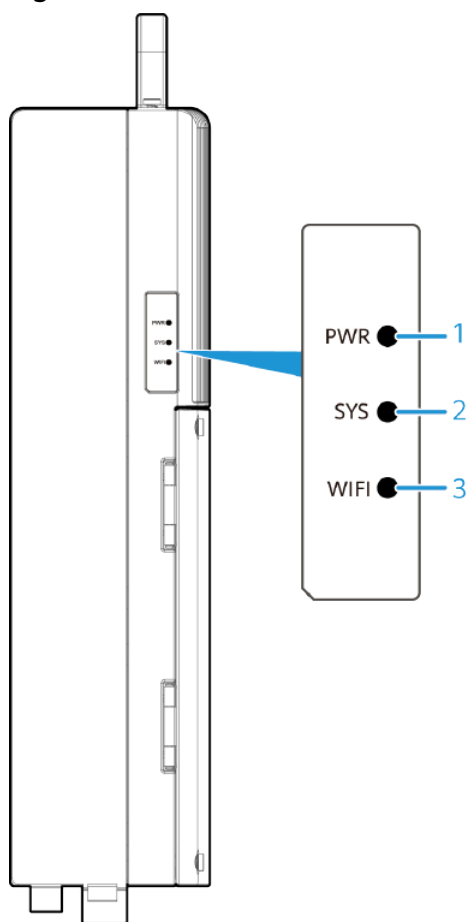
The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

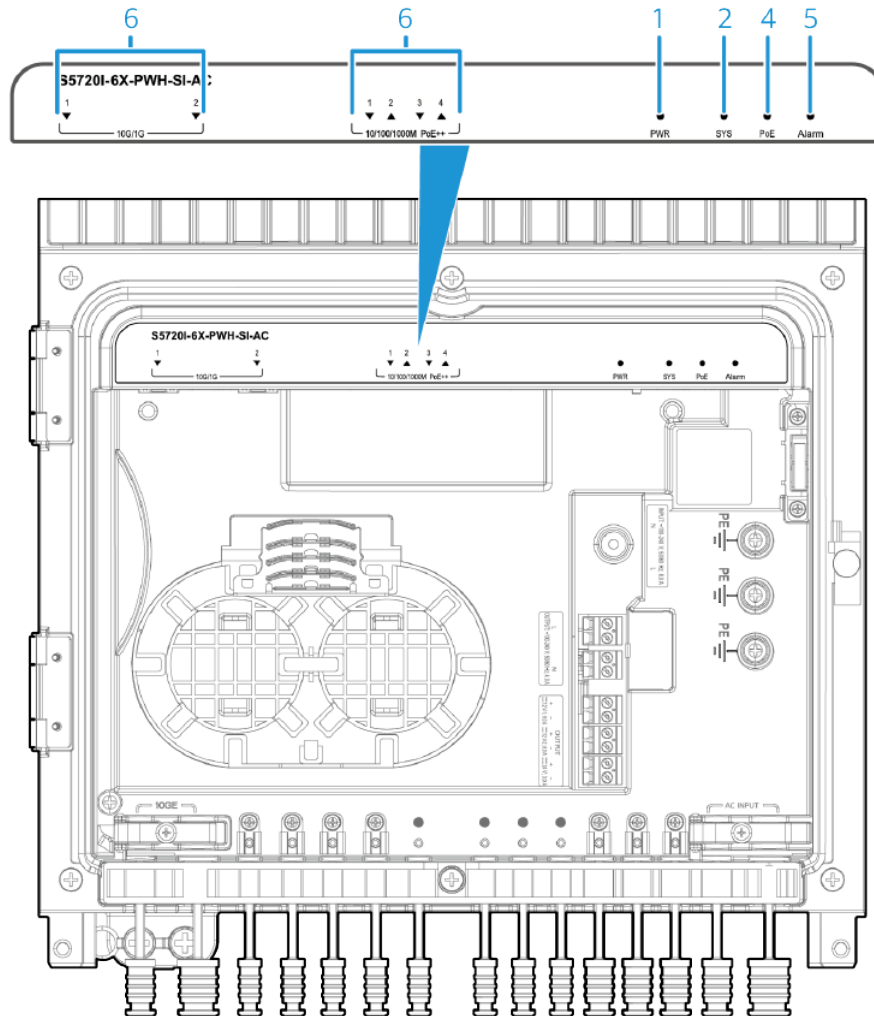
USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

**Figure 4-246** Indicators on the outside of the S5720I-6X-PWH-SI-AC



**Figure 4-247** Indicators inside the maintenance compartment of the S5720I-6X-PWH-SI-AC



**Table 4-634** Description of indicators

No.	Indicator	Name	Color	Status	Description
1	PWR	Built-in power supply indicator	-	Off	The switch is not powered on.
			Green	Steady on	The power module is supplying power normally.
			Yellow or red	Steady on	The built-in power module has failed.

No.	Indicator	Name	Color	Status	Description
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting or is copying the system software and configuration file from a USB flash drive during a USB-based upgrade.
			Green	Slow blinking	The system is operating properly.
			Red	Steady on	The system does not work normally after registration, or a temperature alarm has been generated.
			Red	Blinking	The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.
			Yellow	Blinking	The switch has restarted after a successful upgrade using a USB flash drive. You can remove the USB flash drive from the switch.
3	WIFI	Wi-Fi indicator	Red	Fast blinking	The Wi-Fi function is reserved for future use. You can configure the WIFI indicator on a switch to fast blink red, helping field maintenance personnel quickly find the switch.
4	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected. In this mode, the service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode. This indicator is steady green after you successfully log in to the switch for the first time using the MODE button.
			Green	Blinking	If you fail to log in to the switch for the first time using the MODE button, this indicator fast blinks for 10 seconds, and then returns to the default status.
5	Alarm	12 V DC and 24 V	-	Off	The 12 V DC or 24 V AC power supply is not in use or the output is normal.

No.	Indicator	Name	Color	Status	Description
		AC output power indicator	Red	Steady on	A short circuit has occurred for the 12 V DC or 24 V AC power supply. Check whether the external device is short-circuited.
6	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-635</a> .		

**Table 4-635** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> <li>The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.</li> <li>The total power consumption of PDs has reached the maximum power of the switch.</li> <li>The manual power management mode is used and the port is not enabled to provide power to the PD.</li> </ul>

## Power Supply Configuration

The S5720I-6X-PWH-SI-AC has a built-in power module and does not support pluggable power modules. The S5720I-6X-PWH-SI-AC can be connected to an external 220 V AC power supply. [Table 4-636](#) lists power supply configurations.

**Table 4-636** Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
External 220 V AC power supply	150 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 4</li> <li>● 802.3at (30 W per port): 4</li> <li>● 802.3bt (60 W per port): 2</li> </ul>

### NOTE

The PoE output shares power resources with two 12 V DC outputs and one 24 V AC output. The shared power is 150 W.

## Heat Dissipation

The S5720I-6X-PWH-SI-AC has no fans and uses natural heat dissipation.

## Technical Specifications

[Table 4-637](#) lists technical specifications of the S5720I-6X-PWH-SI-AC.

**Table 4-637** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	41.29 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±1.5 kV in differential mode, ±6 kV in common mode

Item	Description
Power supply surge protection	Impulse current: <ul style="list-style-type: none"> <li>● AC input: 20 kA</li> </ul> Surge: <ul style="list-style-type: none"> <li>● AC input: ±6 kV in differential mode, ±6 kV in common mode</li> <li>● 12 V DC output: ±2 kV in differential mode, ±4 kV in common mode</li> <li>● 24 V AC output: ±2 kV in differential mode, ±6 kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>● Basic dimensions: 390 mm x 300 mm x 110 mm (15.4 in. x 11.8 in. x 4.3 in.)</li> <li>● Maximum dimensions: 474.75 mm x 303.3 mm x 110 mm (18.69 in. x 11.94 in. x 4.3 in.)</li> </ul>
Weight (with packaging)	13.1 kg (28.88 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	220 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	176 V AC to 264 V AC, 45 Hz to 66 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none"> <li>● Without PoE: 26 W</li> <li>● Total power consumption: 188 W (system power consumption: 38 W, total output power: 150 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>● Tested according to ATIS standard</li> <li>● EEE enabled</li> <li>● No PoE power consumption</li> </ul>	25 W

Item	Description
Operating temperature	-40°C to +55°C (-40°F to +131°F) <b>NOTE</b> When the altitude is 1800-4000 m (5906-13123 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch can start when the temperature is higher than -25°C (-13°F).
Storage temperature	-40°C to +85°C (-40°F to +185°F)
IP rating	IP66
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-4000 m (0-13123 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010835

## 4.13.2 S5720I-10X-PWH-SI-AC

### Version Mapping

**Table 4-638** lists the mapping between the S5720I-10X-PWH-SI-AC chassis and software versions.

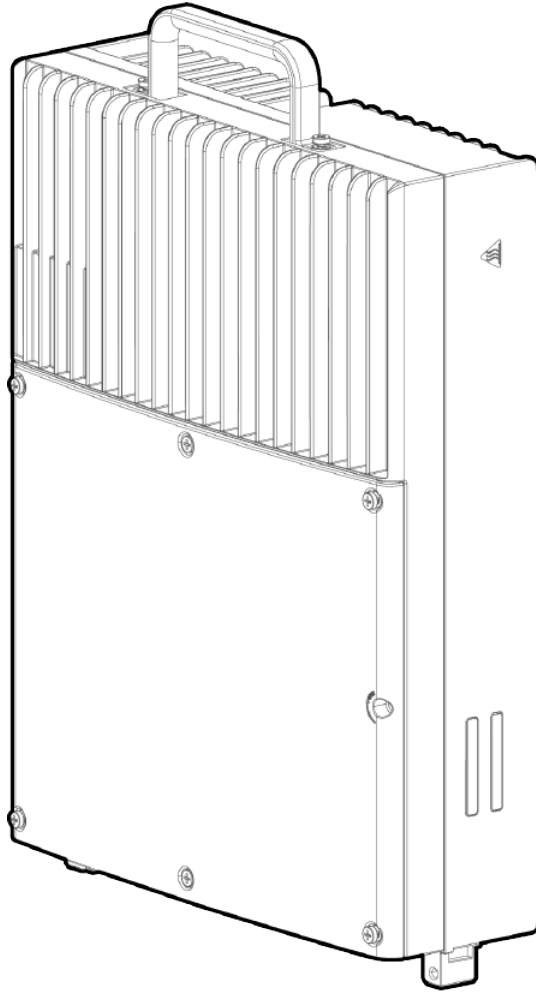
**Table 4-638** Version mapping

Series	Model	Software Version
S5720I-SI	S5720I-10X-PWH-SI-AC	V200R013C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

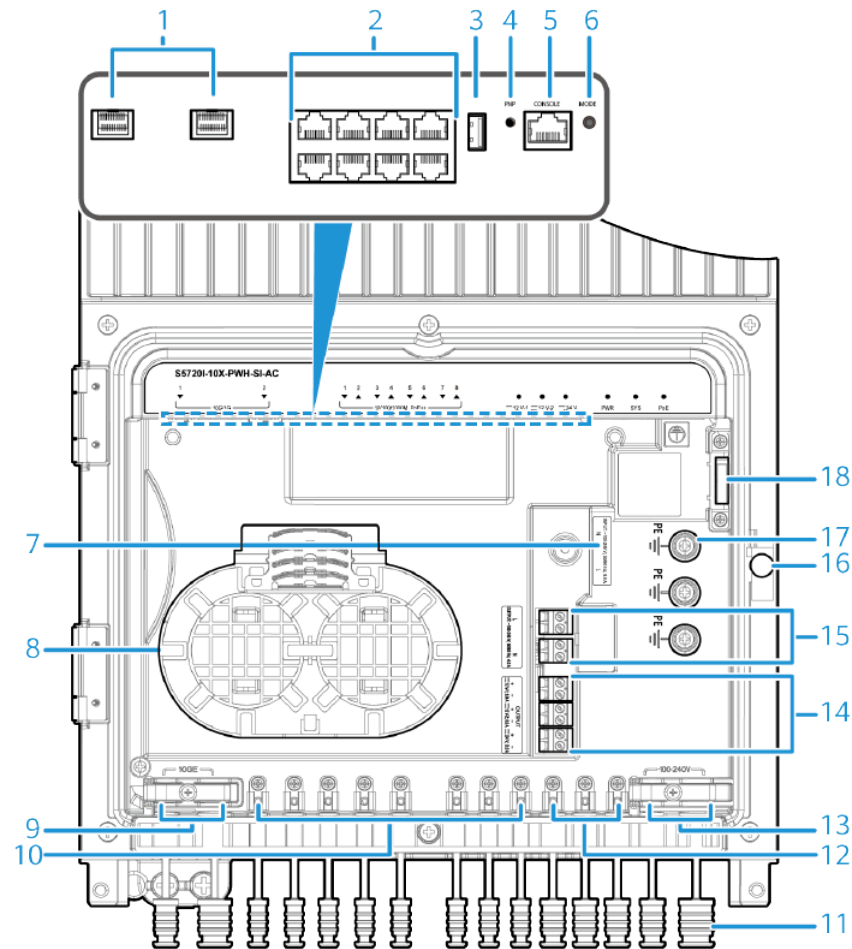


## Appearance and Structure

Figure 4-248 S5720I-10X-PWH-SI-AC appearance



**Figure 4-249** Interior of the S5720I-10X-PWH-SI-AC maintenance compartment



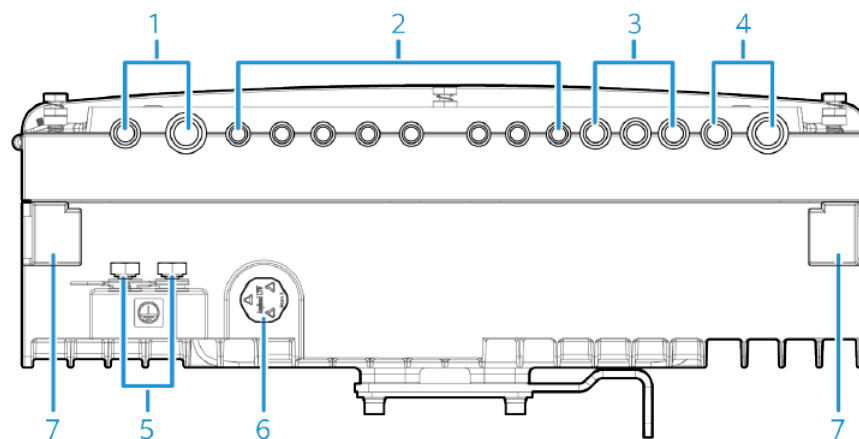
<p>1 Two 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>Industrial optical module</b></li> <li>• <b>GPON optical module</b></li> <li>• Third-party GPON optical modules (Hisense LTE3415-SH+ and CIG G-97S)</li> </ul> <p><b>NOTE</b></p> <p>If one port uses a GPON optical module, the other port cannot be used.</p> <p>The locking bar of an optical port is upward. If an optical module cannot be completely inserted into the optical port, do not force it into the port. Turn the optical module 180 degrees and try again.</p>	<p>2 Eight PoE++ 10/100/1000BASE-T ports</p>
---	--

3	One USB port	4	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	<p>MODE button</p> <p><b>NOTE</b></p> <p>The switch supports two indicator modes: status (default mode) and PoE. To change the current indicator mode, press the MODE button.</p> <p>Hold down the MODE button for 6 seconds and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> <li>• If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of the PoE indicator is as follows: <ul style="list-style-type: none"> <li>• If the system enters the web initial login mode successfully, the PoE indicator turns green and stays on for a maximum of 10 minutes.</li> <li>• If the system fails to enter the initial login mode, the PoE indicator fast blinks for 10 seconds and then restores to the default status.</li> </ul> </li> <li>• If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, the PoE indicator fast blinks for 10 seconds, and then returns to the default status.</li> </ul>

7	<p>AC power input socket</p> <p><b>NOTICE</b></p> <p>The external power supply system must be connected to a circuit breaker (20 A is recommended). For safety purposes, do not use a switch without a circuit breaker.</p> <p>An AC power input socket is used with a power connector, which is included in the installation accessory package delivered with the switch. A power cable needs to be connected to the power connector onsite. If no power cable is available, you can purchase one (part number: 25030398) from Huawei.</p>	8	<p>Fiber management tray (FMT)</p> <p><b>NOTE</b></p> <p>The FMT is removable.</p> <p>A maximum of four fused fibers are supported.</p> <p>Maximum length of a fiber that can be coiled up in the FMT: 20 m (for a single bare fiber) or 1 m (for a single fiber pigtail). If two fibers are used, this length is halved.</p>
9	<p>Two optical fiber outlets</p> <p><b>NOTE</b></p> <p>The diameter of optical fibers supported: 8±0.5 mm to 9.6±0.5 mm (on the left outlet) and 13.3±0.5 mm (on the right outlet).</p>	10	<p>Eight Ethernet cable outlets</p> <p><b>NOTE</b></p> <p>Cat5e and Cat6 Ethernet cables are supported.</p>
11	<p>Rubber bungs for cable outlets</p> <p><b>NOTE</b></p> <p>Rubber bungs must be inserted into the idle cable outlets.</p>	12	<p>Three DC or AC output power cable outlets</p> <p><b>NOTE</b></p> <p>The diameter of power cables supported by an outlet is 9.3±0.5 mm.</p>
13	<p>Two AC input power cable outlets</p> <p><b>NOTE</b></p> <p>The diameter of power cables supported: 9.5±0.5 mm (on the left outlet) and 14±0.5 mm (on the right outlet).</p>	14	<p>DC power output socket</p> <p><b>NOTE</b></p> <p>The switch provides two 12 V DC outputs and one 24 V DC output to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p> <p>Two 12 V DC outputs provide a total of 96 W power. The maximum power of a single output is 96 W.</p> <p>One 24 V DC output provides a maximum of 72 W power.</p> <p>Two 12 V DC outputs and one 24 V DC output share power resources with PoE output. The total shared power is 175 W (110 V input) or 200 W (220 V input).</p>

<p>1 5</p>	<p>AC power output socket 1</p> <p><b>NOTICE</b></p> <p>Cables need to be connected to an AC power output socket onsite. Pay attention to the position of the L and N labels, ensuring that the cables are connected in the correct sockets.</p> <p>The switch provides 110 V or 220 V AC power to external devices, such as strobe lights and non-PoE PTZ dome cameras. The maximum output current is 4 A.</p> <p>The internal 110 V or 220 V AC power supply is used only for external power conversion. It has no circuit breaker, regulated voltage circuit, or surge protection.</p> <p>The connected devices must provide certain surge protection capabilities. Recommended values are 20 kA in differential mode and 20 kA in common mode.</p>	<p>1 6</p>	<p>Latch of the maintenance compartment</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>You need to use the key provided in the installation accessory package to open the door of the maintenance compartment.</li> <li>After the maintenance compartment door is closed, the latch is automatically locked.</li> </ul>
<p>1 7</p>	<p>PE cable ground terminal</p> <p><b>NOTE</b></p> <p>It is used to ground a PE power cable for 220 V AC input or output.</p>	<p>1 8</p>	<p>Door-opening alarm button</p> <p><b>NOTE</b></p> <p>When the door of the maintenance compartment is opened, a door-opening alarm is reported.</p>

Figure 4-250 Bottom of the S5720I-10X-PWH-SI-AC chassis



<p>1</p>	<p>Two optical fiber outlets</p> <p><b>NOTE</b></p> <p>The diameter of optical fibers supported: <math>8\pm 0.5</math> mm to <math>9.6\pm 0.5</math> mm (on the left outlet) and <math>13.3\pm 0.5</math> mm (on the right outlet).</p>	<p>2</p>	<p>Eight Ethernet cable outlets</p> <p><b>NOTE</b></p> <p>Cat5e and Cat6 Ethernet cables are supported.</p>
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3	<p>Three DC or AC output power cable outlets</p> <p><b>NOTE</b> The diameter of power cables supported by an outlet is 9.3±0.5 mm.</p>	4	<p>Two AC input power cable outlets</p> <p><b>NOTE</b> The diameter of power cables supported: 9.5±0.5 mm (on the left outlet) and 14±0.5 mm (on the right outlet).</p>
5	<p>Ground screw</p> <p><b>NOTE</b> It is used to ground the switch. The ground cable needs to be purchased separately.</p>	6	<p>Atmospheric pressure valve</p> <p><b>NOTE</b> It ensures that the atmospheric pressure inside and outside the switch are the same.</p>
7	<p>Mounting column for a cable cover</p> <p><b>NOTE</b> It is used to mount an optional cable cover.</p>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-639](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-639** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	<p>It supports long-distance interconnection with Huawei cameras. For example, it supports the distance of 200 m at 100 Mbit/s and supports the distance of 250 m at 10 Mbit/s.</p> <ul style="list-style-type: none"> <li>The supported camera models are M2220-I, M2221-FL, M2221-VL, M2260-I, and M2220-I(8-32mm).</li> <li>If the transmission distance exceeds 100 m, Category 5E or higher Ethernet cables are required.</li> </ul>

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-640](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-640** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-641](#).

**Table 4-641** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

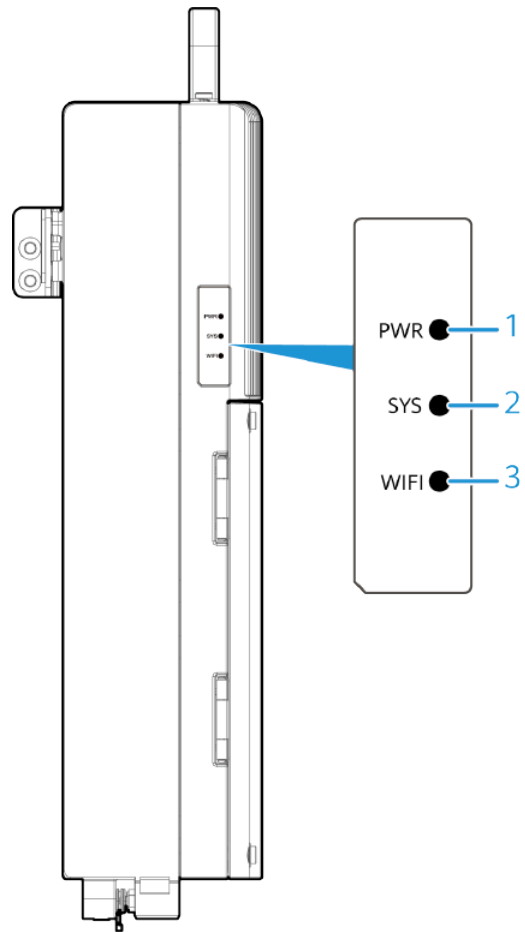
The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

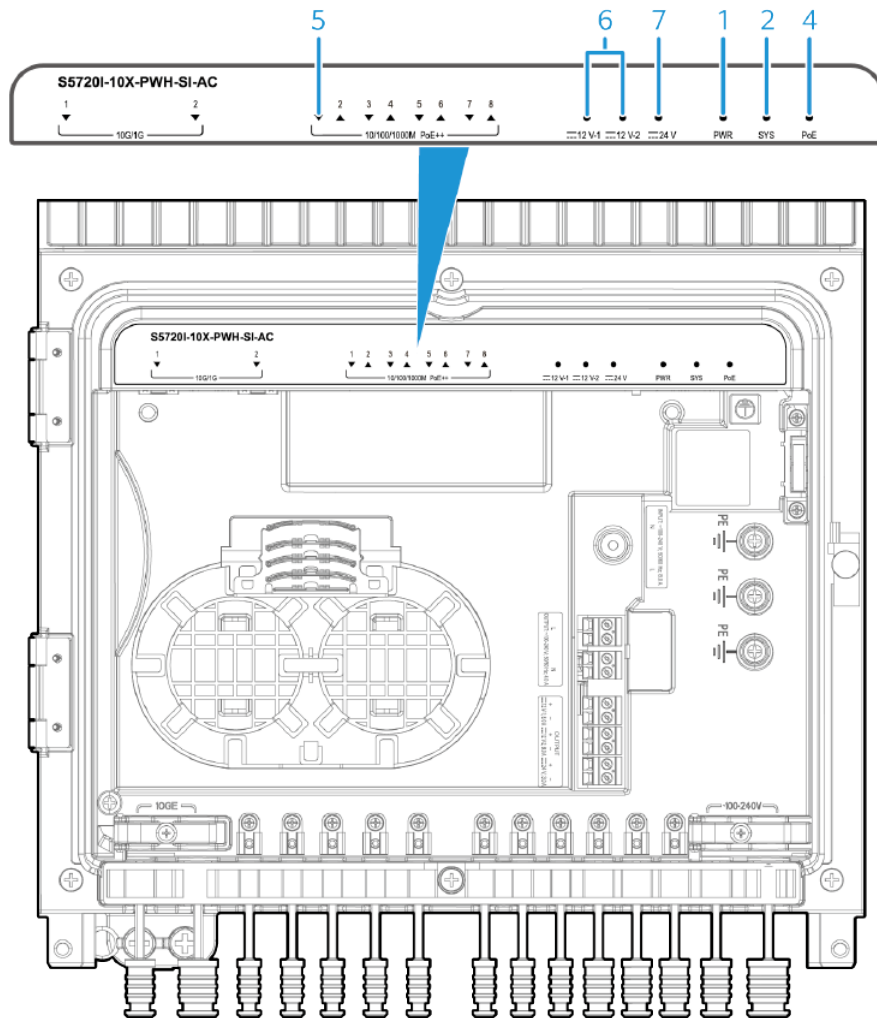
## Indicator Description

Figure 4-251 Indicators on the outside of the S5720I-10X-PWH-SI-AC





**Figure 4-252** Indicators inside the maintenance compartment of the S5720I-10X-PWH-SI-AC



**Table 4-642** Description of indicators

No .	Indicator	Name	Color	Status	Description
1	PWR	Built-in power supply indicator	-	Off	The switch is not powered on.
			Green	Steady on	The power module is supplying power normally.
			Yellow or red	Steady on	The built-in power module has failed.
2	SYS	System status indicator	-	Off	The system is not running.

No.	Indicator	Name	Color	Status	Description
			Green	Fast blinking	The system is starting or is copying the system software and configuration file from a USB flash drive during a USB-based upgrade.
			Green	Slow blinking	The system is operating properly.
			Red	Steady on	The system does not work normally after registration, or a temperature alarm has been generated.
			Red	Blinking	The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.
			Yellow	Blinking	The switch has restarted after a successful upgrade using a USB flash drive. You can remove the USB flash drive from the switch.
3	WIFI	Wi-Fi indicator	Red	Fast blinking	The Wi-Fi function is reserved for future use. You can configure the WIFI indicator on a switch to fast blink red, helping field maintenance personnel quickly find the switch.
4	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected. In this mode, the service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode. This indicator is steady green after you successfully log in to the switch for the first time using the MODE button.
			Green	Blinking	If you fail to log in to the switch for the first time using the MODE button, this indicator fast blinks for 10 seconds, and then returns to the default status.
5	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-643</a> .		

No.	Indicator	Name	Color	Status	Description
6	12V-V1	12 V DC output indicator	-	Off	The 12 V DC power module is not supplying power.
	12V-V2		Green	Steady on	The 12 V DC power module is supplying power.
7	24V	24 V DC output indicator	-	Off	The 24 V DC power module is not supplying power.
			Green	Steady on	The 24 V DC power module is supplying power.

**Table 4-643** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> <li>The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.</li> <li>The total power consumption of PDs has reached the maximum power of the switch.</li> <li>The manual power management mode is used and the port is not enabled to provide power to the PD.</li> </ul>

## Power Supply Configuration

The S5720I-10X-PWH-SI-AC has a built-in power module and does not support pluggable power modules. The S5720I-10X-PWH-SI-AC can be connected to an external 110 V or 220 V AC power supply. [Table 4-644](#) lists power supply configurations.

**Table 4-644** Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
External 220 V AC power supply	200 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 8</li> <li>● 802.3at (30 W per port): 6</li> <li>● 802.3bt (60 W per port): 3</li> </ul>
External 110 V AC power supply	175 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 8</li> <li>● 802.3at (30 W per port): 5</li> <li>● 802.3bt (60 W per port): 2</li> </ul>

### NOTE

The PoE output shares power resources with two 12 V DC outputs and one 24 V DC output. The shared power is 175 W (110 V input) or 200 W (220 V input).

## Heat Dissipation

The S5720I-10X-PWH-SI-AC has no fans and uses natural heat dissipation.

## Technical Specifications

[Table 4-645](#) lists technical specifications of the S5720I-10X-PWH-SI-AC.

**Table 4-645** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	34.4 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.999999
Service port surge protection	±1.5 kV in differential mode, ±6 kV in common mode
Power supply surge protection	AC input (impulse current): 20 kA DC output (surge): ±6 kV in differential mode, ±6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions: 390 mm x 300 mm x 100 mm (15.4 in. x 11.8 in. x 3.9 in.)</li> <li>Maximum dimensions: 474.75 mm x 303.3 mm x 124.77 mm (18.69 in. x 11.94 in. x 4.91 in.)</li> </ul>
Weight (with packaging)	12.8 kg (28.22 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none"> <li>Without PoE: 33 W</li> <li>100% PoE loads: 263 W (system power consumption: 63 W, PoE: 200 W)</li> </ul>
Typical power consumption (30% of traffic load)	<p>30 W</p> <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>

Item	Description
Operating temperature	-40°C to +55°C (-40°F to +131°F) <b>NOTE</b> When the altitude is 1800-4000 m (5906-13123 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch can start when the temperature is higher than -25°C (-13°F).
Storage temperature	-40°C to +85°C (-40°F to +185°F)
IP rating	IP66
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-4000 m (0-13123 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	98010832

### 4.13.3 S5720I-12X-SI-AC

#### Version Mapping

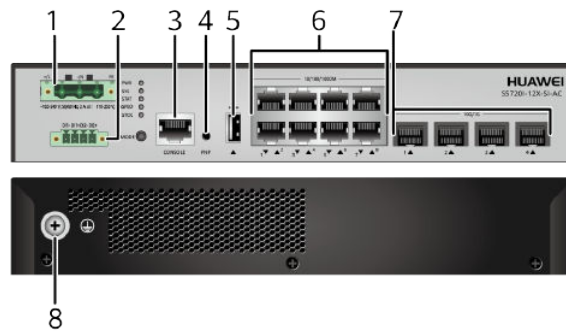
[Table 4-646](#) lists the mapping between the S5720I-12X-SI-AC chassis and software versions.

**Table 4-646** Version mapping

Series	Switch Model	Software Version
S5720I-SI	S5720I-12X-SI-AC	V200R012C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

Figure 4-253 S5720I-12X-SI-AC appearance



1	<p>AC input power socket</p> <p><b>NOTE</b></p> <p>It must be used with the Phoenix connector, which is included in the installation accessory package.</p>	2	<p>Monitoring port</p> <p><b>NOTE</b></p> <p>It must be used with the Phoenix connector, which is included in the installation accessory package.</p> <p>The monitoring port detects the status of external devices, for example, monitoring the opening and closing of the cabinet door.</p> <p>For details about how to use a monitoring port, see "Monitoring Interface Configuration" in the CLI-based Configuration Guide - Device Management Configuration Guide.</p>
3	<p>One console port</p>	4	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	<p>One USB port</p>	6	<p>Eight 10/100/1000BASE-T ports</p>

7	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>Industrial optical module</b></li> <li>• <b>3 m SFP+ high-speed cable</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>	8	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 4-647](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-647** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	<p>It supports long-distance interconnection with Huawei cameras. For example, it supports the distance of 200 m at 100 Mbit/s and supports the distance of 250 m at 10 Mbit/s.</p> <ul style="list-style-type: none"> <li>• The supported camera models are M2220-I, M2221-FL, M2221-VL, M2260-I, and M2220-I(8-32mm).</li> <li>• If the transmission distance exceeds 100 m, Category 5E or higher Ethernet cables are required.</li> </ul>

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-648](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-648** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC



Attribute	Description
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-649](#).

**Table 4-649** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

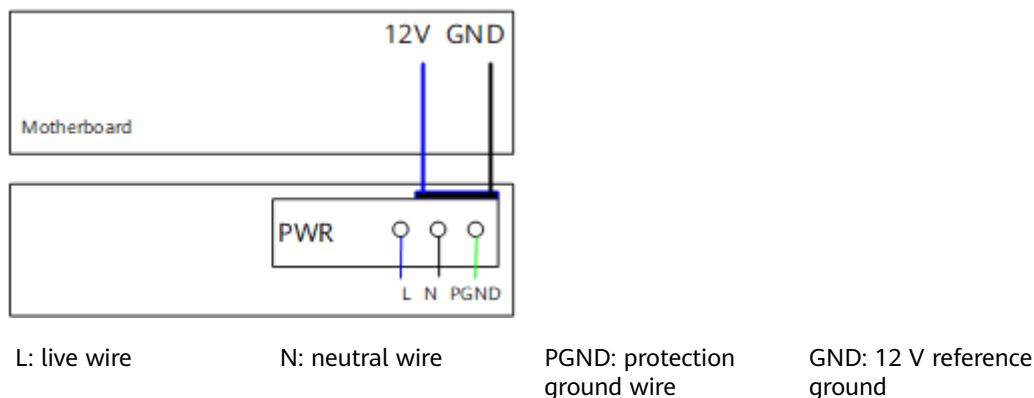
The S5720I-12X-SI-AC has similar indicators to those of the S5720I-12X-PWH-SI-DC except that the S5720I-12X-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720I-12X-SI-AC has a built-in power module and does not support pluggable power modules.

**Figure 4-254** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-254** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720I-12X-SI-AC has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-650** lists technical specifications of the S5720I-12X-SI-AC.

**Table 4-650** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	67.89 years
Mean time to repair (MTTR)	2
Availability	> 0.99999
Service port surge protection	±1.5 kV in differential mode, ±6 kV in common mode

Item	Description
Power supply surge protection	±6 kV in differential mode, ±6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.8 in. x 7.1 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 250.0 mm x 186.36 mm (1.72 in. x 9.8 in. x 7.34 in.)</li> </ul>
Weight (with packaging)	2.65 kg (5.84 lb)
Stack ports	Eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz 110 V DC to 250 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz 110 V DC to 250 V DC
Maximum power consumption (100% throughput)	17 W
Typical power consumption (30% of traffic load)	15.6 W
	<ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>

Item	Description
Operating temperature	<ul style="list-style-type: none"> <li>-40°C to +65°C (-40°F to +149°F) (installed in the sealing cabinet)</li> <li>-40°C to +70°C (-40°F to +158°F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM)</li> <li>-40°C to +75°C (-40°F to +167°F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM)</li> </ul> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Storage temperature	-40°C to +85°C (-40°F to +185°F)
Protection rating	IP30
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	98010794

## 4.13.4 S5720I-12X-PWH-SI-DC

### Version Mapping

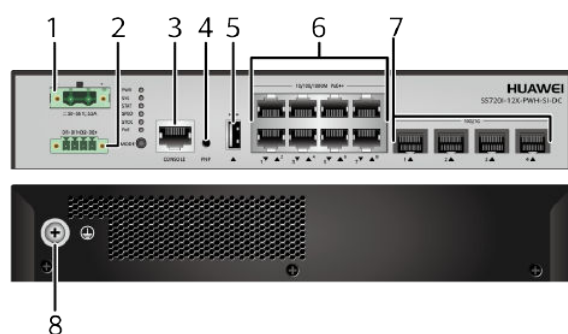
[Table 4-651](#) lists the mapping between the S5720I-12X-PWH-SI-DC chassis and software versions.

**Table 4-651** Version mapping

Series	Switch Model	Software Version
S5720I-SI	S5720I-12X-PWH-SI-DC	V200R012C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-255** S5720I-12X-PWH-SI-DC appearance



1	<p>DC input power socket</p> <p><b>NOTE</b></p> <p>It must be used with the Phoenix connector, which is included in the installation accessory package.</p>	2	<p>Monitoring port</p> <p><b>NOTE</b></p> <p>It must be used with the Phoenix connector, which is included in the installation accessory package.</p> <p>The monitoring port detects the status of external devices, for example, monitoring the opening and closing of the cabinet door.</p> <p>For details about how to use a monitoring port, see "Monitoring Interface Configuration" in the CLI-based Configuration Guide - Device Management Configuration Guide.</p>
3	<p>One console port</p>	4	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

5	One USB port	6	Eight PoE++ 10/100/1000BASE-T ports
7	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>Industrial optical module</b></li> <li>• <b>3 m SFP+ high-speed cable</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>	8	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 4-652](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-652** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	<p>It supports long-distance interconnection with Huawei cameras. For example, it supports the distance of 200 m at 100 Mbit/s and supports the distance of 250 m at 10 Mbit/s.</p> <ul style="list-style-type: none"> <li>• The supported camera models are M2220-I, M2221-FL, M2221-VL, M2260-I, and M2220-I(8-32mm).</li> <li>• If the transmission distance exceeds 100 m, Category 5E or higher Ethernet cables are required.</li> </ul>

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-653](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-653** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-654](#).

**Table 4-654** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

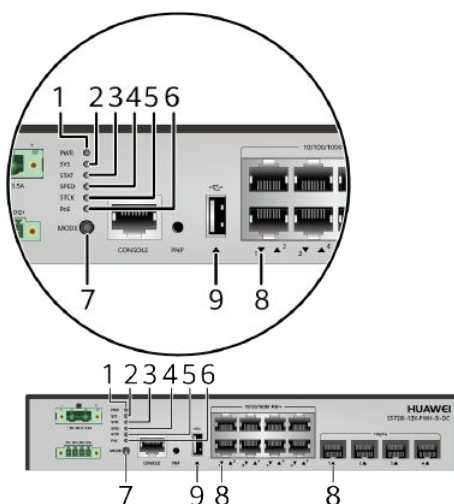
## Indicator Description

### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-256 Indicators on the S5720I-12X-PWH-SI-DC



### NOTE

The S5720I-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5720I-SI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 4-655 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.



No.	Indicator	Name	Color	Status	Description
			Yellow or red	Steady on	The built-in power module has failed.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
3	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
5	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.

No.	Indicator	Name	Color	Status	Description
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-656</a> .		

No.	Indicator	Name	Color	Status	Description
9	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-656** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
		Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.

Display Mode	Color	Status	Description
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> <li>• The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.</li> <li>• The total power consumption of PDs has reached the maximum power of the switch.</li> <li>• The manual power management mode is used and the port is not enabled to provide power to the PD.</li> </ul>
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>• If the indicators of ports 1 to 8 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>• If the indicators of ports 1 to 8 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5720I-12X-PWH-SI-DC has a built-in power module and does not support pluggable power modules. It can directly connect to the external power module with 50 V DC to 56 V DC power or the PAC-260WA-E or PAC240S56-CN power module. [Table 4-657](#) lists its power supply configurations.

**Table 4-657** Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
External power module with 50 V to 56 V DC power supply	220 W by default; 240 W at most	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 8</li> <li>● 802.3at (30 W per port): 8</li> <li>● 802.3bt (60 W per port): 4</li> </ul>
260 W power module (PAC-260WA-E)	220 W by default; 240 W at most	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 8</li> <li>● 802.3at (30 W per port): 8</li> <li>● 802.3bt (60 W per port): 4</li> </ul>
240 W power module (PAC240S56-CN)	220 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 8</li> <li>● 802.3at (30 W per port): 7</li> <li>● 802.3bt (60 W per port): 3</li> </ul>

### NOTE

The PoE power supply of S5720I-12X-PWH-SI-DC is in direct mode. The input voltage must meet the PoE standard. If the input voltage does not meet the PoE standard, the voltage on the PD side may be too low.

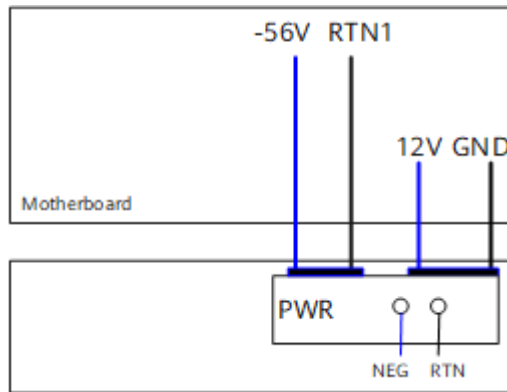
If the external DC power supply is in grounding design, the non-isolated AP and camera cannot be used. In this case, isolate the AP and camera.

If a non-Huawei external DC power supply is used, ensure that it meets the following requirement:

Maximum power consumption of the device (20 W) + Number of PoE ports in use x PoE consumption of each port

[Figure 4-257](#) shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis and -56 V output to the PoE power supply.

**Figure 4-257** Power supply connections of a single DC power module



NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

RTN1: -56 V reference ground

## Heat Dissipation

The S5720I-12X-PWH-SI-DC has no fans and uses natural heat dissipation.

## Technical Specifications

[Table 4-658](#) lists technical specifications of the S5720I-12X-PWH-SI-DC.

**Table 4-658** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	64.23 years
Mean time to repair (MTTR)	2
Availability	> 0.99999
Service port surge protection	±1.5 kV in differential mode, ±6 kV in common mode
Power supply surge protection	±2 kV in differential mode, ±4 kV in common mode

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.8 in. x 7.1 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 250.0 mm x 186.36 mm (1.72 in. x 9.8 in. x 7.34 in.)</li> </ul>
Weight (with packaging)	2.5 kg (5.51 lb)
Stack ports	Eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	50 V DC to 56 V DC
Maximum voltage range	46 V DC to 57 V DC
Maximum power consumption (100% throughput)	Using PAC-260WA-E power module: <ul style="list-style-type: none"> <li>Without PoE: 28.8 W</li> <li>100% PoE loads: 288.4 W (system power consumption: 48.4 W, PoE: 240 W)</li> </ul> Using PAC240S56-CN power module: <ul style="list-style-type: none"> <li>Without PoE: 26.5 W</li> <li>100% PoE loads: 270.1 W (system power consumption: 50.1 W, PoE: 220 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	Using PAC-260WA-E power module: 27.6 W Using PAC240S56-CN power module: 25 W

Item	Description
Operating temperature	<ul style="list-style-type: none"> <li>-40°C to +65°C (-40°F to +149°F) (installed in the sealing cabinet)</li> <li>-40°C to +70°C (-40°F to +158°F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM)</li> <li>-40°C to +75°C (-40°F to +167°F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM)</li> </ul> <p><b>NOTE</b>                      When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Storage temperature	-40°C to +85°C (-40°F to +185°F)
Protection rating	IP30
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	98010795

### 4.13.5 S5720I-28X-SI-AC

#### Version Mapping

[Table 4-659](#) lists the mapping between the S5720I-28X-SI-AC chassis and software versions.

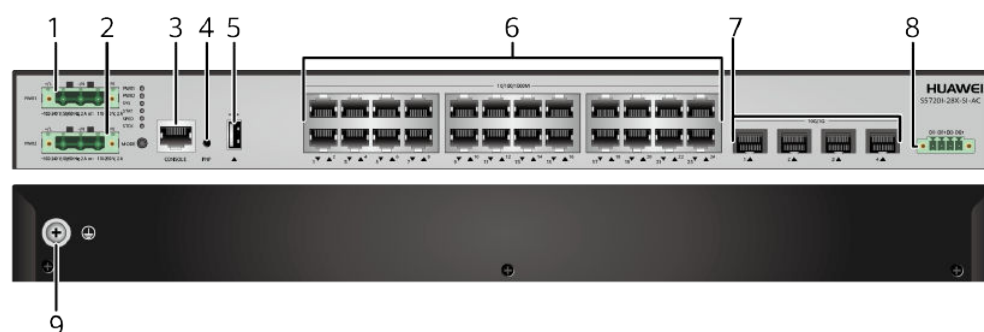


**Table 4-659** Version mapping

Series	Model	Software Version
S5720I-SI	S5720I-28X-SI-AC	V200R012C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-258** S5720I-28X-SI-AC appearance



1	AC power input port 1 <b>NOTE</b> It must be used with the Phoenix connector, which is included in the installation accessory package.	2	AC power input port 2 <b>NOTE</b> It must be used with the Phoenix connector, which is included in the installation accessory package.
3	One console port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One USB port	6	Twenty-four 10/100/1000BASE-T ports

7	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>Industrial optical module</b></li> <li>• <b>3 m SFP+ high-speed cable</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>	8	<p>Monitoring port</p> <p><b>NOTE</b></p> <p>It must be used with the Phoenix connector, which is included in the installation accessory package.</p> <p>The monitoring port detects the status of external devices, for example, monitoring the opening and closing of the cabinet door.</p> <p>For details about how to use a monitoring port, see "Monitoring Interface Configuration" in the CLI-based Configuration Guide - Device Management Configuration Guide.</p>
9	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 4-660](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-660** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	<p>It supports long-distance interconnection with Huawei cameras. For example, it supports the distance of 200 m at 100 Mbit/s and supports the distance of 250 m at 10 Mbit/s.</p> <ul style="list-style-type: none"> <li>• The supported camera models are M2220-I, M2221-FL, M2221-VL, M2260-I, and M2220-I(8-32mm).</li> <li>• If the transmission distance exceeds 100 m, Category 5E or higher Ethernet cables are required.</li> </ul>

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-661](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-661** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-662](#).

**Table 4-662** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

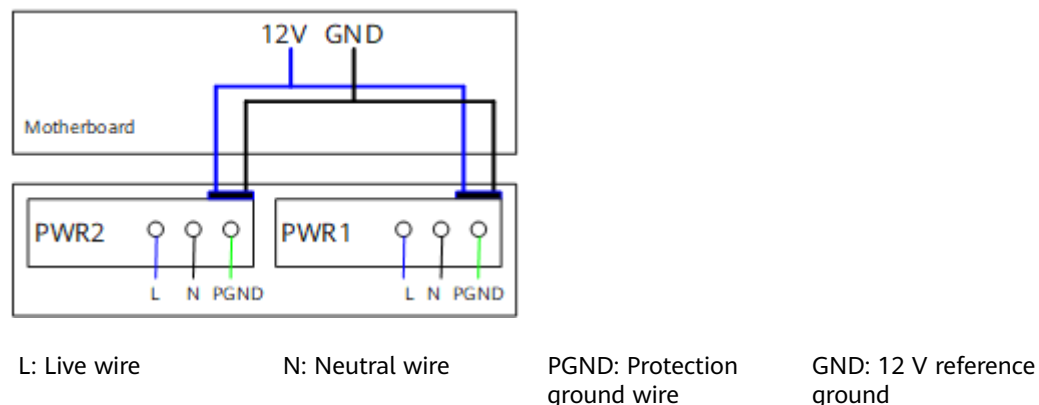
The S5720I-28X-SI-AC has similar indicators to those of the S5720I-28X-PWH-SI-AC except that the S5720I-28X-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720I-28X-SI-AC has two built-in power modules for 1+1 power redundancy and does not support pluggable power modules.

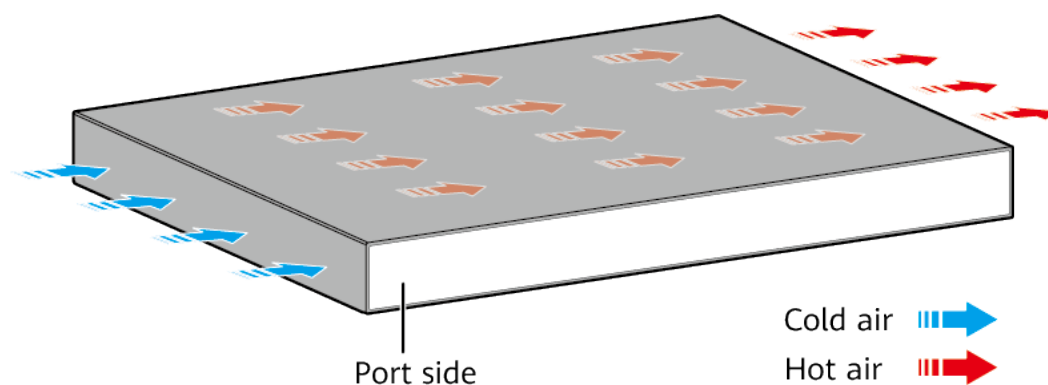
**Figure 4-259** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-259** Power supply connections of dual AC power modules



## Heat Dissipation

The S5720I-28X-SI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-663** lists technical specifications of the S5720I-28X-SI-AC.

**Table 4-663** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	72.32 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±1.5 kV in differential mode, ±6 kV in common mode
Power supply surge protection	±6 kV in differential mode, ±6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 226.26 mm (1.72 in. x 17.4 in. x 8.91 in.)</li> </ul>
Weight (with packaging)	4.5 kg (9.92 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz 110 V DC to 250 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz 110 V DC to 250 V DC
Maximum power consumption (100% throughput, full speed of fans)	29.3 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	24.8 W
Operating temperature	-40°C to +65°C (-40°F to +149°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +85°C (-40°F to +185°F)
Protection rating	IP20
Noise under normal temperature (27°C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010796

## 4.13.6 S5720I-28X-PWH-SI-AC

### Version Mapping

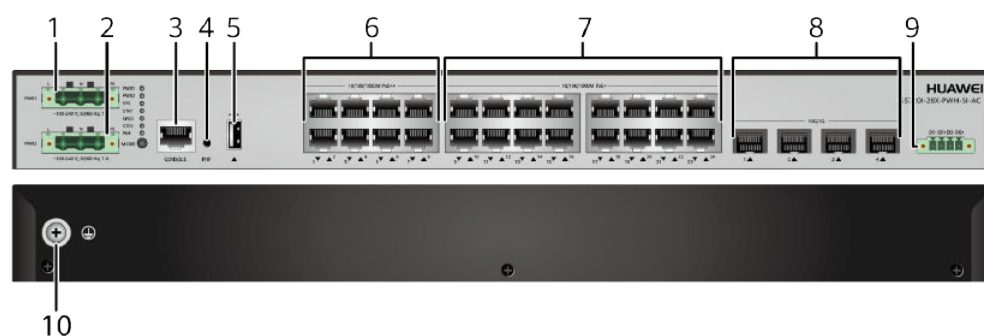
**Table 4-664** lists the mapping between the S5720I-28X-PWH-SI-AC chassis and software versions.

**Table 4-664** Version mapping

Series	Model	Software Version
S5720I-SI	S5720I-28X-PWH-SI-AC	V200R012C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-260** S5720I-28X-PWH-SI-AC appearance



1	AC power input port 1 <b>NOTE</b> It must be used with the Phoenix connector, which is included in the installation accessory package.	2	AC power input port 2 <b>NOTE</b> It must be used with the Phoenix connector, which is included in the installation accessory package.
3	One console port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One USB port	6	Eight PoE++ 10/100/1000BASE-T ports

7	Sixteen PoE+ 10/100/1000BASE-T ports	8	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>Industrial optical module</b></li> <li>• <b>3 m SFP+ high-speed cable</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
9	Monitoring port <b>NOTE</b> It must be used with the Phoenix connector, which is included in the installation accessory package. The monitoring port detects the status of external devices, for example, monitoring the opening and closing of the cabinet door. For details about how to use a monitoring port, see "Monitoring Interface Configuration" in the CLI-based Configuration Guide - Device Management Configuration Guide.	10	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 4-665](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-665** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	It supports long-distance interconnection with Huawei cameras. For example, it supports the distance of 200 m at 100 Mbit/s and supports the distance of 250 m at 10 Mbit/s. <ul style="list-style-type: none"> <li>• The supported camera models are M2220-I, M2221-FL, M2221-VL, M2260-I, and M2220-I(8-32mm).</li> <li>• If the transmission distance exceeds 100 m, Category 5E or higher Ethernet cables are required.</li> </ul>



### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-666](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-666** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-667](#).

**Table 4-667** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

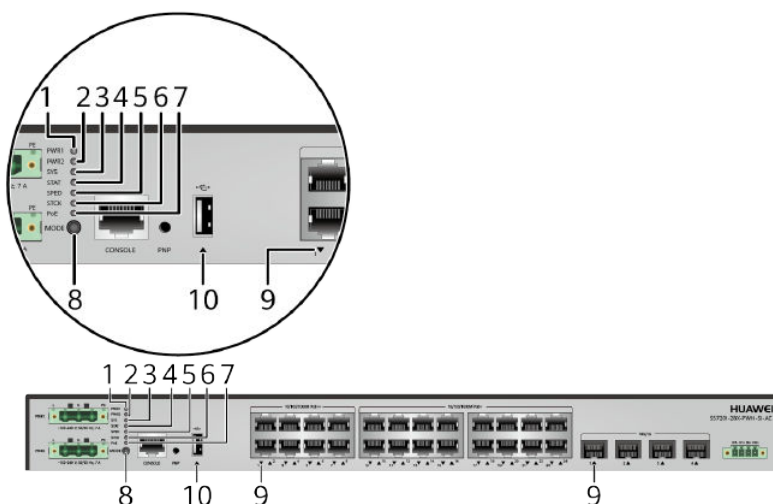
## Indicator Description

### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-261** Indicators on the S5720I-28X-PWH-SI-AC



### NOTE

The S5720I-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5720I-SI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

**Table 4-668** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.

No.	Indicator	Name	Color	Status	Description
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator	Name	Color	Status	Description
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-669</a> .		
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.

No.	Indicator	Name	Color	Status	Description
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-669** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).

Display Mode	Color	Status	Description
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> <li>The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.</li> <li>The total power consumption of PDs has reached the maximum power of the switch.</li> <li>The manual power management mode is used and the port is not enabled to provide power to the PD.</li> </ul>
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5720I-28X-PWH-SI-AC has two built-in power modules for 1+1 power redundancy and does not support pluggable power modules.

The following two PoE power supply modes are available:

- High-power mode (default): When double power modules are used, they provide 369.6 W PoE power for the eight PoE++ ports and 369.6 W PoE power for the sixteen PoE+ ports (total of 739.2 W PoE power). When either of the two power modules fails, the eight PoE++ ports can supply power for PDs normally; however, the PDs connected to the sixteen PoE+ ports are powered off, and the PoE function is unavailable. When a single power module is used, only the eight PoE++ ports can supply PoE power for PDs.
- PoE backup mode: You can run the **poe-power backup-mode** command to manually switch the PoE power supply mode to the backup mode. In backup mode, the entire system provides 369.6 W PoE power regardless of whether a single power module or double power modules are used. That is, all 24 ports

share the 369.6 W power. When double power modules are used, they work in 1+1 redundancy mode.

 **NOTE**

When the power supply mode is manually switched to the PoE backup mode, the PDs connected to all ports are powered off and then powered on again.

When the switch works in PoE backup mode, the PDs connected to all ports are powered off and then powered on again if the switch is restarted.

**Table 4-670** lists its power supply configurations.

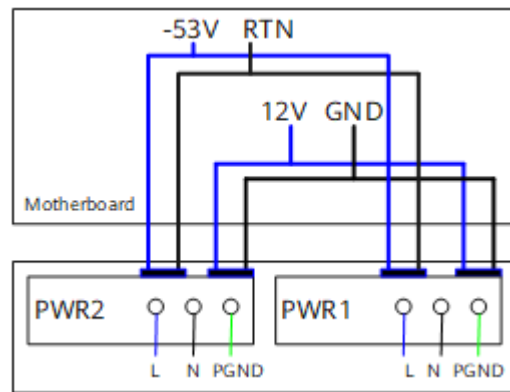
**Table 4-670** Power supply configurations

Power Supply Mode	Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
High-power mode	Single power module	369.6 W	Eight PoE++ ports: <ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 8</li> <li>● 802.3at (30 W per port): 8</li> <li>● 802.3bt (60 W per port): 6</li> </ul> Sixteen PoE+ ports: N/A
	Double power modules	739.2 W	Eight PoE++ ports: <ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 8</li> <li>● 802.3at (30 W per port): 8</li> <li>● 802.3bt (60 W per port): 6</li> </ul> Sixteen PoE+ ports: <ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 16</li> <li>● 802.3at (30 W per port): 12</li> </ul>
PoE backup mode	Single power module	369.6 W	Twenty-four ports: <ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 12</li> <li>● 802.3bt (60 W per port): 6 (Only the eight PoE++ ports support this configuration.)</li> </ul>
	Double power modules		



**Figure 4-262** shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

**Figure 4-262** Power supply by dual AC PoE power modules



L: live wire

N: neutral wire

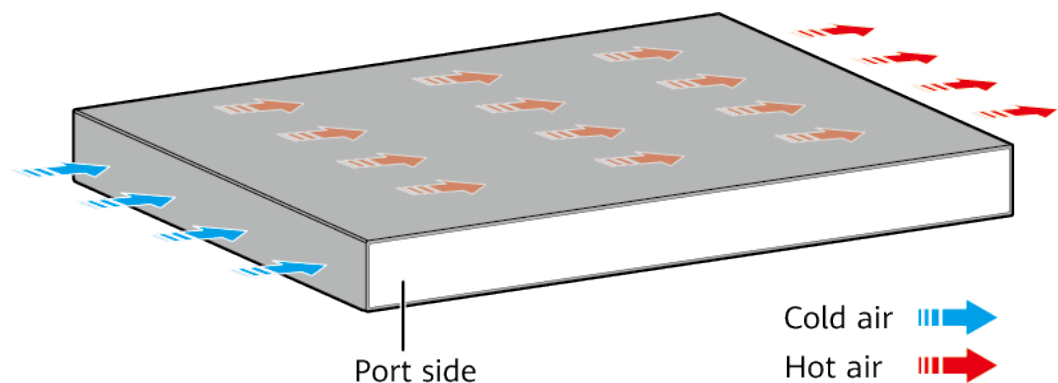
PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

## Heat Dissipation

The S5720I-28X-PWH-SI-AC has four built-in fans for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-671** lists technical specifications of the S5720I-28X-PWH-SI-AC.

**Table 4-671** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	45.94 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±1.5 kV in differential mode, ±6 kV in common mode
Power supply surge protection	±6 kV in differential mode, ±6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 316.46 mm (1.72 in. x 17.4 in. x 12.46 in.)</li> </ul>
Weight (with packaging)	6.7 kg (14.77 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Without PoE: 57.8 W</li> <li>100% PoE loads: 905 W (system power consumption: 165.8 W, PoE: 739.2 W)</li> </ul>

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	34.6 W
Operating temperature	-40°C to +65°C (-40°F to +149°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +85°C (-40°F to +185°F)
Protection rating	IP20
Noise under normal temperature (27°C, sound power)	< 47 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010797

## 4.14 S5730-SI

### 4.14.1 S5730-48C-SI-AC

#### Version Mapping

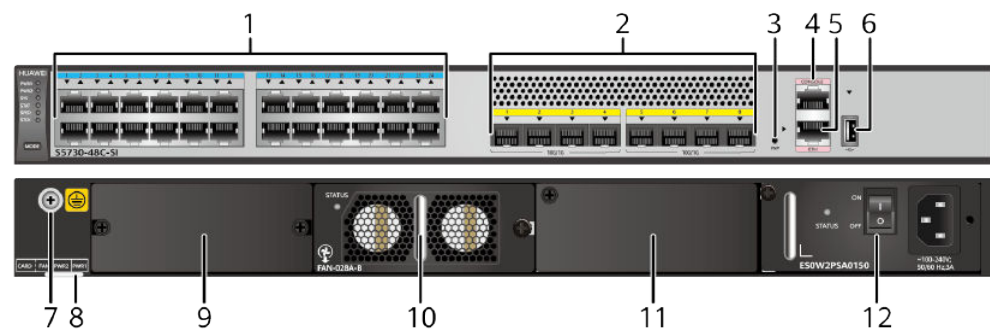
**Table 4-672** lists the mapping between the S5730-48C-SI-AC chassis and software versions.

**Table 4-672** Version mapping

Series	Model	Software Version
S5730-SI	S5730-48C-SI-AC	V200R011C10 to V200R019C10 versions

## Appearance and Structure

**Figure 4-263** S5730-48C-SI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Eight 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
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3	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p> <p><b>NOTE</b></p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	<p>One ETH management port</p>	6	<p>One USB port</p>
7	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <a href="#">ground cable</a>.</p>	8	<p>ESN label</p> <p><b>NOTE</b></p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Card supported:</p> <ul style="list-style-type: none"> <li>• <a href="#">ES5D21Q04Q01</a></li> <li>• <a href="#">ES5D21VST000</a> (applicable in V200R012C00 and later versions)</li> </ul>	10	<p>Fan slot</p> <p><b>NOTE</b></p> <p>Applicable fan module: <a href="#">FAN-028A-B</a></p>
11	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	12	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>

## Interface Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-673](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-673** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

Attribute	Description
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-674](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-674** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-675](#).

**Table 4-675** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-676](#) describes the attributes of an ETH management port.

**Table 4-676** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

### Indicator Description

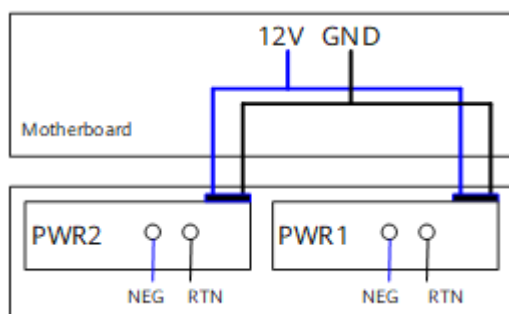
The S5730-48C-SI-AC has similar indicators to those of the S5730-68C-PWR-SI-AC except that the S5730-48C-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5730-48C-SI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

**Figure 4-264** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-264** Power supply connections of dual DC power modules



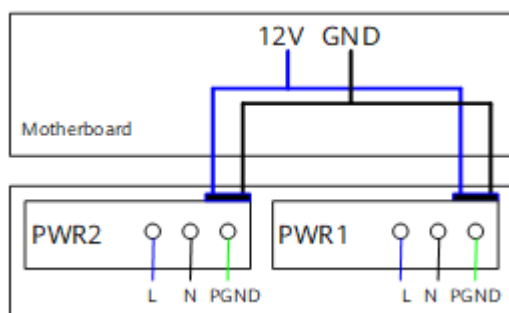
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

**Figure 4-265** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-265** Power supply connections of dual AC power modules



L: Live wire

N: Neutral wire

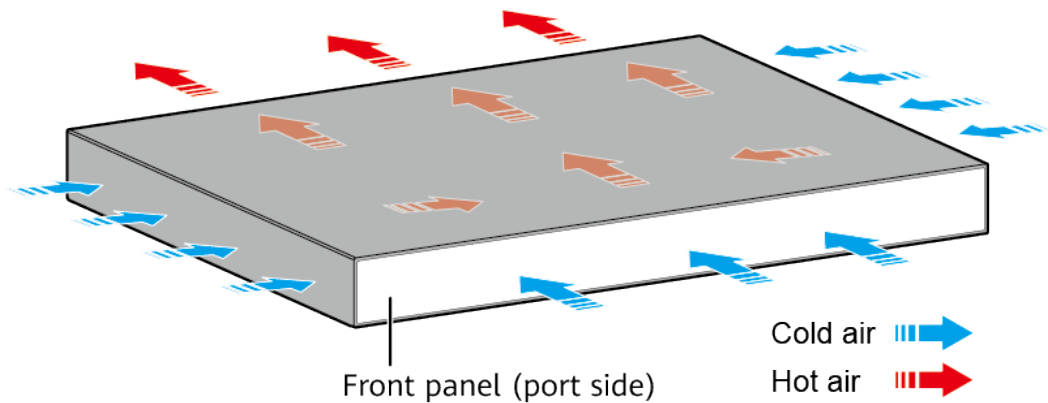
PGND: Protection  
ground wire

GND: 12 V reference  
ground

## Heat Dissipation

The S5730-48C-SI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.





 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-677](#) lists technical specifications of the S5730-48C-SI-AC.

**Table 4-677** Technical specifications

Item	Parameter
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	47.83 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 425.0 mm (1.75 in. x 17.4 in. x 16.73 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.)</li> </ul>

Item	Parameter
Weight (with packaging)	8.2 kg (18.08 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	62.4 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	39.02 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.

Item	Parameter
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 59.4 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010710

## 4.14.2 S5730-48C-PWR-SI-AC

### Version Mapping

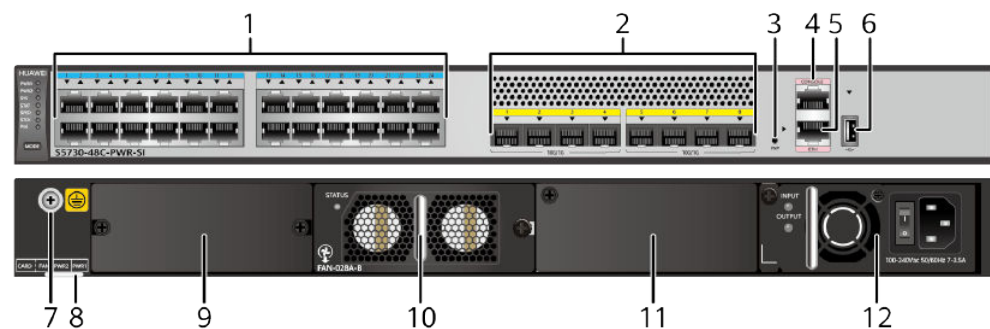
[Table 4-678](#) lists the mapping between the S5730-48C-PWR-SI-AC chassis and software versions.

**Table 4-678** Version mapping

Series	Model	Software Version
S5730-SI	S5730-48C-PWR-SI-AC	V200R011C10 to V200R019C10 versions

## Appearance and Structure

**Figure 4-266** S5730-48C-PWR-SI-AC appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Eight 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
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3	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p> <p><b>NOTE</b></p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	<p>One ETH management port</p>	6	<p>One USB port</p>
7	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <a href="#">ground cable</a>.</p>	8	<p>ESN label</p> <p><b>NOTE</b></p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Card supported:</p> <ul style="list-style-type: none"> <li>• <a href="#">ES5D21Q04Q01</a></li> <li>• <a href="#">ES5D21VST000</a> (applicable in V200R012C00 and later versions)</li> </ul>	10	<p>Fan slot</p> <p><b>NOTE</b></p> <p>Applicable fan module: <a href="#">FAN-028A-B</a></p>
11	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> </ul>	12	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> </ul>

## Interface Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-679](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-679** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

Attribute	Description
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-680](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-680** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-681](#).

**Table 4-681** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-682](#) describes the attributes of an ETH management port.

**Table 4-682** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5730-48C-PWR-SI-AC has the same types of indicators as the S5730-68C-PWR-SI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5730-48C-PWR-SI-AC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power

module and a 650 W DC power module can be used together in the switch. [Table 4-683](#) lists its power supply configurations.

**Table 4-683** Power supply configurations

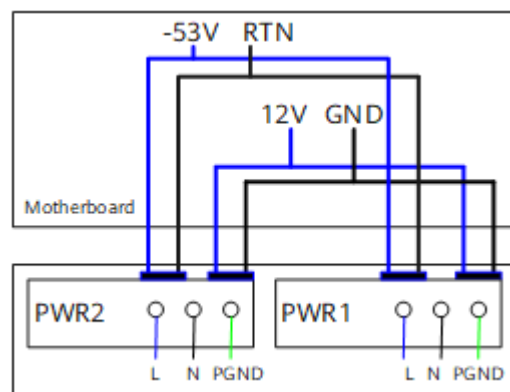
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	–	369.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>

**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 4-267](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

**Figure 4-267** Power supply by dual AC PoE power modules



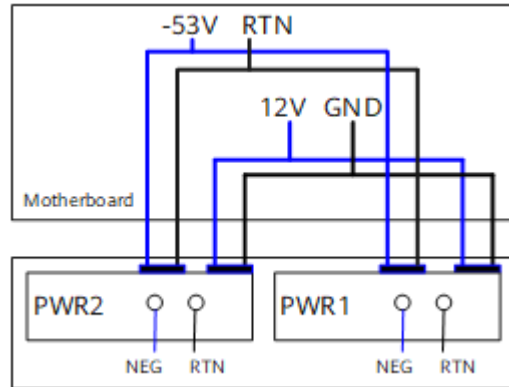
L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

[Figure 4-268](#) shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V



and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

**Figure 4-268** Power supply connections of dual DC PoE power modules



NEG: negative wire

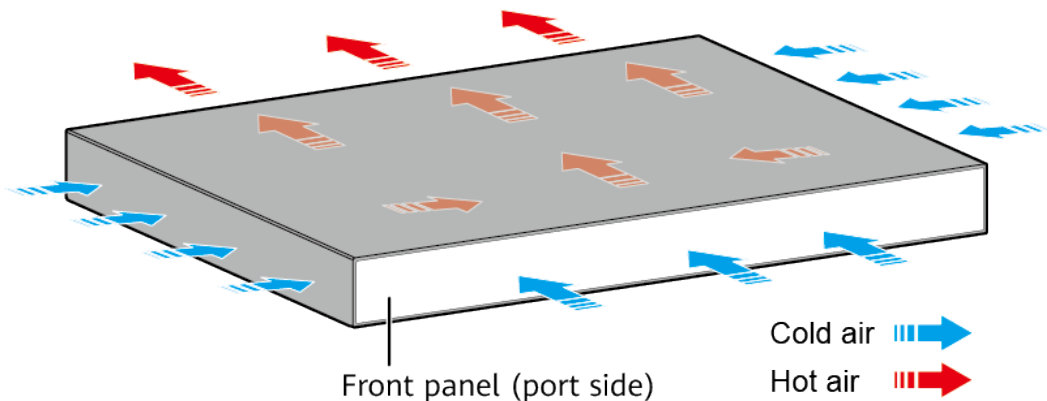
RTN: positive wire

GND: 12 V reference ground

RTN: -53 V reference ground

## Heat Dissipation

The S5730-48C-PWR-SI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-684** lists technical specifications of the S5730-48C-PWR-SI-AC.

**Table 4-684** Technical specifications

Item	Description
Memory (RAM)	1 GB

Item	Description
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	46.8 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using 500 W AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using 650 W DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 425.0 mm (1.75 in. x 17.4 in. x 16.73 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.)</li> </ul>
Weight (with packaging)	8.3 kg (18.3 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 83.2 W (without card)</li> <li>100% PoE loads: 967 W (system power consumption: 227.8 W, PoE: 739.2 W, without card)</li> </ul>

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	44.2 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.                     The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.4 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010712

### 4.14.3 S5730-68C-SI-AC

#### Version Mapping

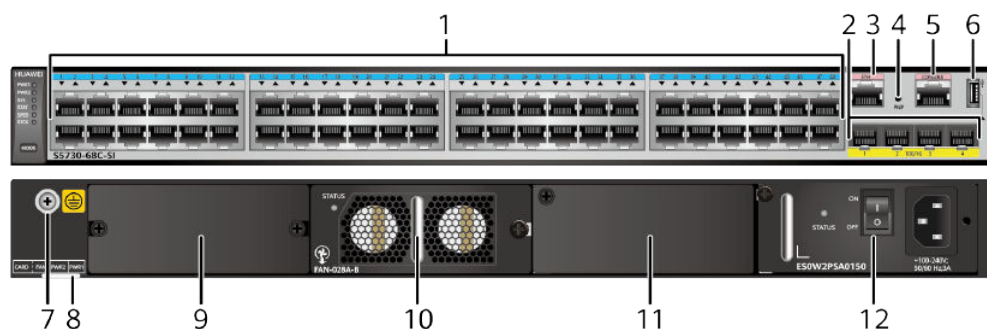
**Table 4-685** lists the mapping between the S5730-68C-SI-AC chassis and software versions.

**Table 4-685** Version mapping

Series	Model	Software Version
S5730-SI	S5730-68C-SI-AC	V200R011C10 to V200R019C10 versions

#### Appearance and Structure

**Figure 4-269** S5730-68C-SI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One ETH management port	4	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	<p>One console port</p> <p><b>NOTE</b></p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>	8	<p>ESN label</p> <p><b>NOTE</b></p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>

9	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <a href="#">ES5D21Q04Q01</a></li> <li>• <a href="#">ES5D21VST000</a> (applicable in V200R012C00 and later versions)</li> </ul>	1 0	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">FAN-028A-B</a>
1 1	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	1 2	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>

## Interface Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-686](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-686** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-687](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-687** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-688](#).

**Table 4-688** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-689](#) describes the attributes of an ETH management port.

**Table 4-689** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5730-68C-SI-AC has similar indicators to those of the S5730-68C-PWR-SI-AC except that the S5730-68C-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

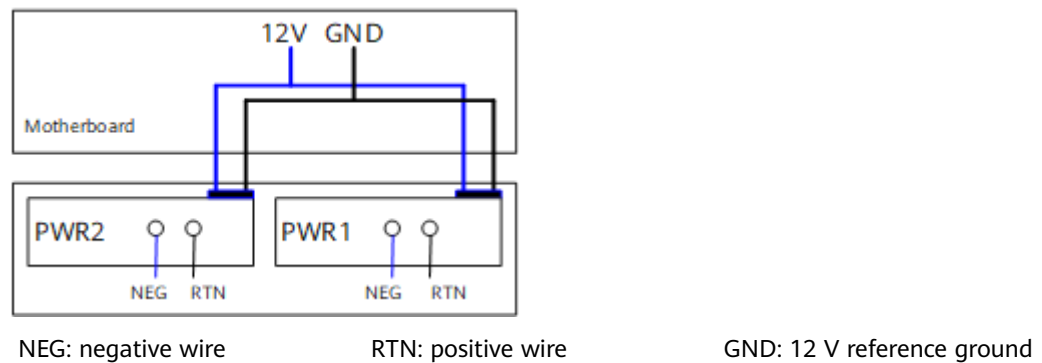
## Power Supply Configuration

The S5730-68C-SI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 4-270](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

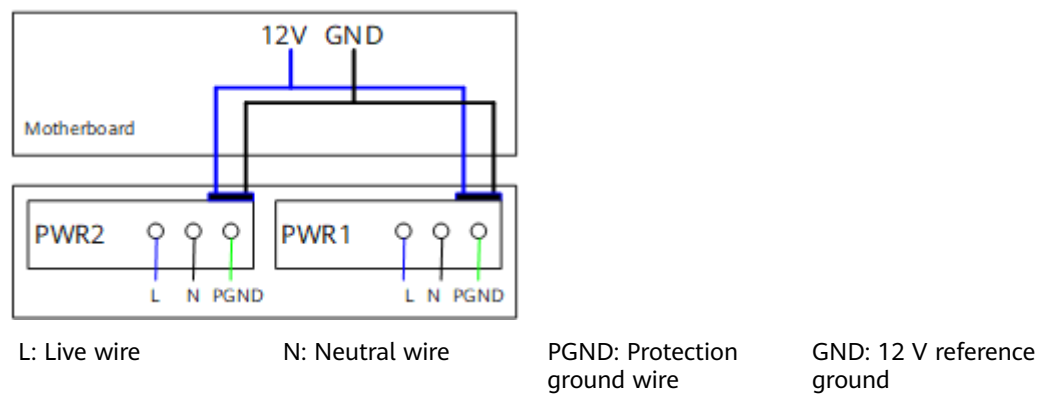


**Figure 4-270** Power supply connections of dual DC power modules



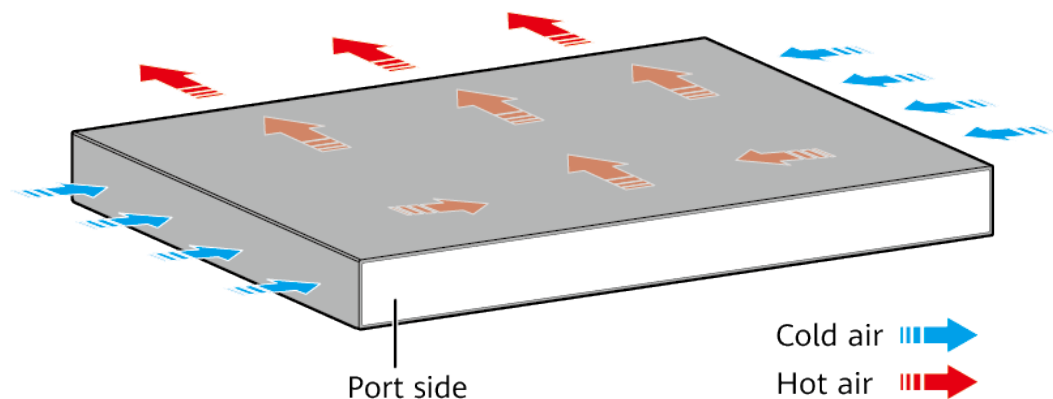
**Figure 4-271** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-271** Power supply connections of dual AC power modules



## Heat Dissipation

The S5730-68C-SI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-690** lists technical specifications of the S5730-68C-SI-AC.

**Table 4-690** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	46.53 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 425.0 mm (1.75 in. x 17.4 in. x 16.73 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.)</li> </ul>
Weight (with packaging)	8.5 kg (18.74 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	65.4 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	42.3 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.

Item	Description
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	98010713

## 4.14.4 S5730-68C-PWR-SI-AC

### Version Mapping

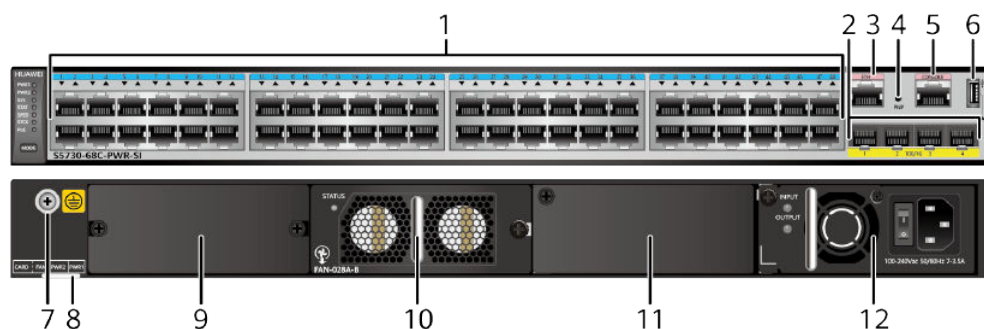
**Table 4-691** lists the mapping between the S5730-68C-PWR-SI-AC chassis and software versions.

**Table 4-691** Version mapping

Series	Model	Software Version
S5730-SI	S5730-68C-PWR-SI-AC	V200R011C10 to V200R019C10 versions

### Appearance and Structure

**Figure 4-272** S5730-68C-PWR-SI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One ETH management port	4	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	<p>One console port</p> <p><b>NOTE</b></p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>	8	<p>ESN label</p> <p><b>NOTE</b></p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>

9	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <a href="#">ES5D21Q04Q01</a></li> <li>• <a href="#">ES5D21VST000</a> (applicable in V200R012C00 and later versions)</li> </ul>	1 0	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">FAN-028A-B</a>
1 1	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> </ul>	1 2	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> </ul>

## Interface Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-692](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-692** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-693](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-693** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-694](#).

**Table 4-694** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-695](#) describes the attributes of an ETH management port.

**Table 4-695** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

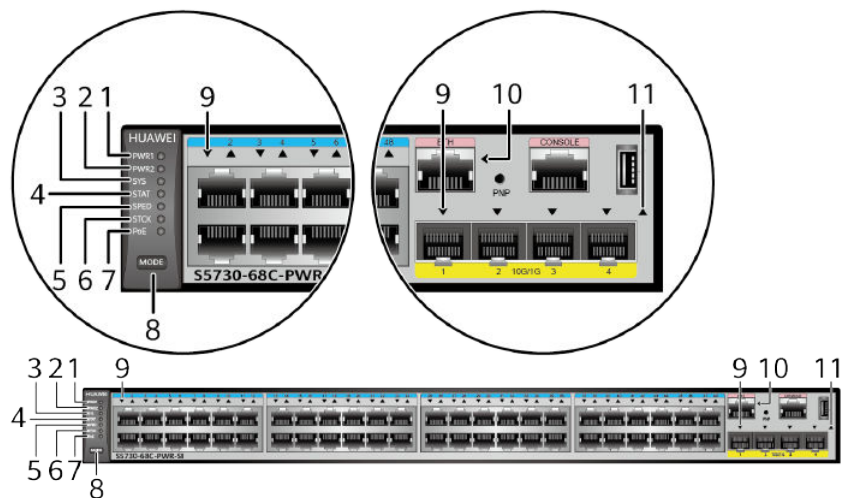
#### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.



**Figure 4-273** Indicators on the S5730-68C-PWR-SI-AC



**NOTE**

The S5730-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators of a switch. If the switch fails, its SYS indicator and mode indicators can be configured to blink red fast so that field maintenance personnel can find this faulty switch.

**Table 4-696** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>

No.	Indicator	Name	Color	Status	Description
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator	Name	Color	Status	Description
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"><li>If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li><li>If you are changing the indicator mode: The stack mode is not selected.</li></ul>
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"><li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li><li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li></ul> After 45 seconds, the service port indicators automatically restore to the status mode.
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator	Name	Color	Status	Description
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-697</a> .		
10	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
11	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-697** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.

Display Mode	Color	Status	Description
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> <li>The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.</li> <li>The total power consumption of PDs has reached the maximum power of the switch.</li> <li>The manual power management mode is used and the port is not enabled to provide power to the PD.</li> </ul>
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5730-68C-PWR-SI-AC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. [Table 4-698](#) lists its power supply configurations.

**Table 4-698** Power supply configurations

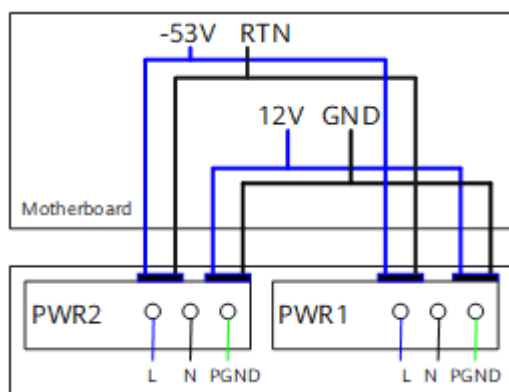
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 24</li> </ul>

**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

**Figure 4-274** shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

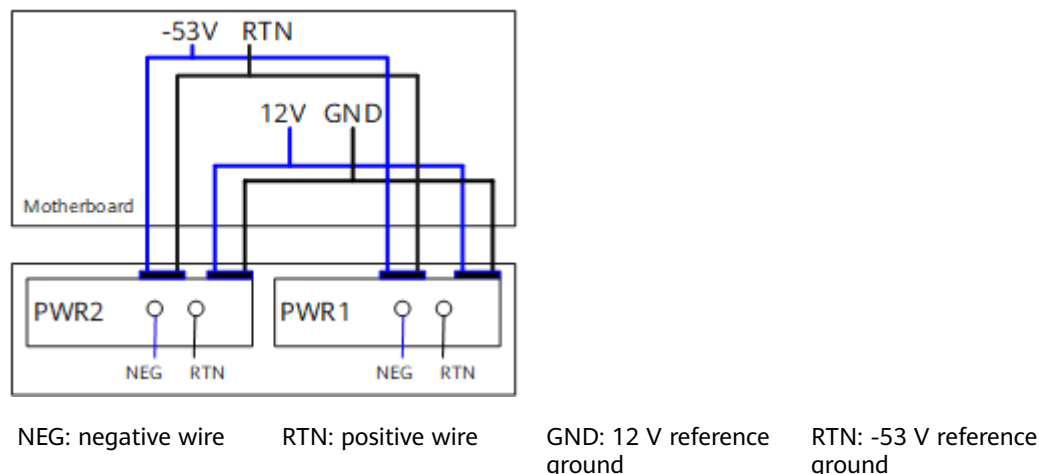
**Figure 4-274** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

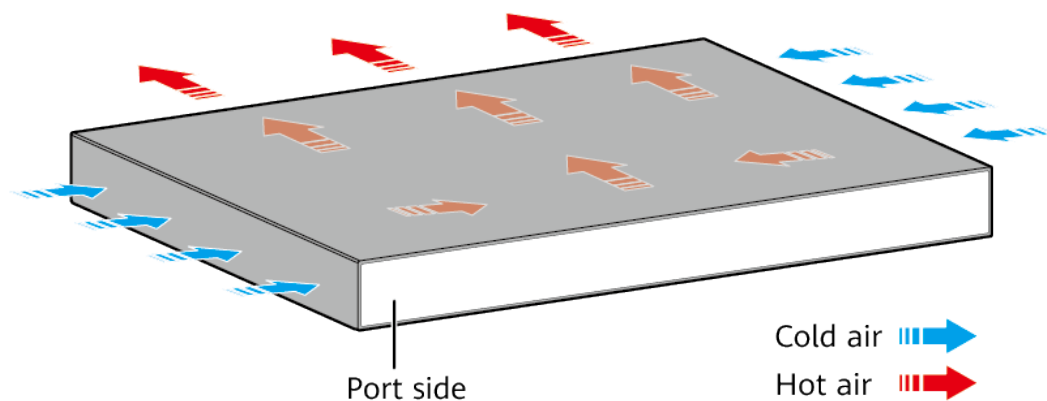
**Figure 4-275** shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

**Figure 4-275** Power supply connections of dual DC PoE power modules



## Heat Dissipation

The S5730-68C-PWR-SI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-699** lists technical specifications of the S5730-68C-PWR-SI-AC.

**Table 4-699** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.



Item	Description
Mean time between failures (MTBF)	43.28 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using 500 W AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using 650 W DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 425.0 mm (1.75 in. x 17.4 in. x 16.73 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.)</li> </ul>
Weight (with packaging)	8.8 kg (19.4 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 68.3 W (without card)</li> <li>100% PoE loads: 925 W (system power consumption: 185.8 W, PoE: 739.2 W, without card)</li> </ul>

Item	Description
<p>Typical power consumption (30% of traffic load)</p> <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	<p>50.1 W (without card)</p>
<p>Operating temperature</p>	<p>0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.</p>
<p>Short-term operating temperature</p>	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
<p>Storage temperature</p>	<p>-40°C to +70°C (-40°F to +158°F)</p>
<p>Noise under normal temperature (27°C, sound power)</p>	<p>&lt; 57.5 dB(A)</p>
<p>Relative humidity</p>	<p>5% to 95%, noncondensing</p>

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010714

## 4.14.5 S5730-68C-PWR-SI

### Version Mapping

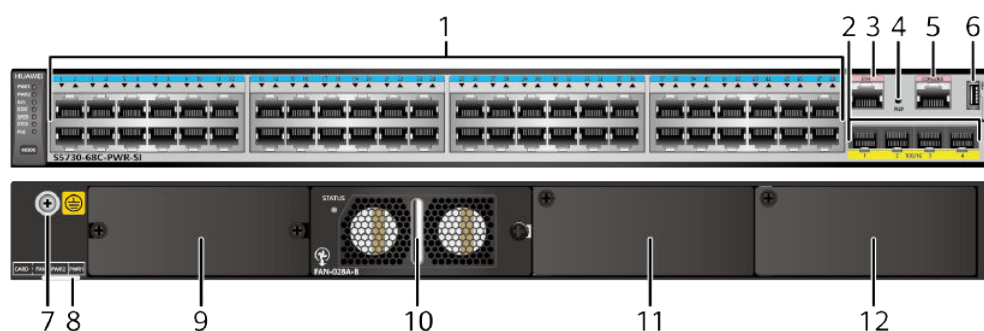
**Table 4-700** lists the mapping between the S5730-68C-PWR-SI chassis and software versions.

**Table 4-700** Version mapping

Series	Model	Software Version
S5730-SI	S5730-68C-PWR-SI	V200R011C10 to V200R019C10 versions

### Appearance and Structure

**Figure 4-276** S5730-68C-PWR-SI appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One ETH management port	4	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	<p>One console port</p> <p><b>NOTE</b></p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>	8	<p>ESN label</p> <p><b>NOTE</b></p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>

9	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <a href="#">ES5D21Q04Q01</a></li> <li>• <a href="#">ES5D21VST000</a> (applicable in V200R012C00 and later versions)</li> </ul>	1 0	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">FAN-028A-B</a>
1 1	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> <li>• <a href="#">1150 W AC PoE power module</a></li> <li>• <a href="#">1000 W AC PoE power module</a> (applicable in V200R013C00 and later versions)</li> </ul>	1 2	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> <li>• <a href="#">1150 W AC PoE power module</a></li> <li>• <a href="#">1000 W AC PoE power module</a> (applicable in V200R013C00 and later versions)</li> </ul>

## Interface Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-701](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-701** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-702](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-702** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-703](#).

**Table 4-703** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-704](#) describes the attributes of an ETH management port.

**Table 4-704** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5730-68C-PWR-SI has the same types of indicators as the S5730-68C-PWR-SI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5730-68C-PWR-SI is a PoE switch. It has two power module slots, each of which can have a 500 W, 650 W, 1150 W, or 1000 W (applicable in V200R013C00 and later versions) power module installed. A 500 W AC power module and a 650 W DC power module can be used together in the switch. A 1150 W AC power module and a 1000 W AC power module can be used together in the switch. [Table 4-705](#) lists its power supply configurations.

**Table 4-705** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 24</li> </ul>
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 26</li> </ul>
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 29</li> <li>802.3at (30 W per port): 14</li> </ul>
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 29</li> </ul>
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 25</li> </ul>
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 25</li> </ul>



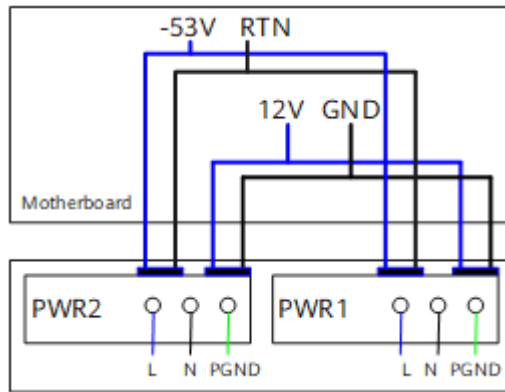
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 29</li> </ul>
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 29</li> </ul>

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

**Figure 4-277** shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

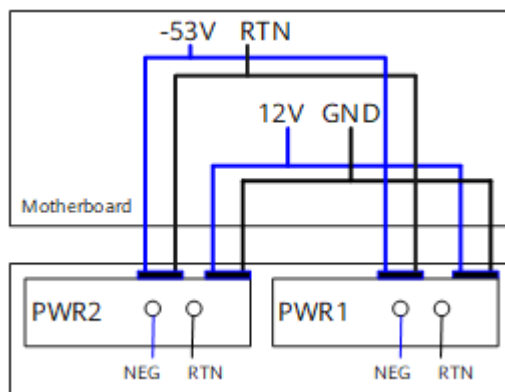
**Figure 4-277** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

**Figure 4-278** shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

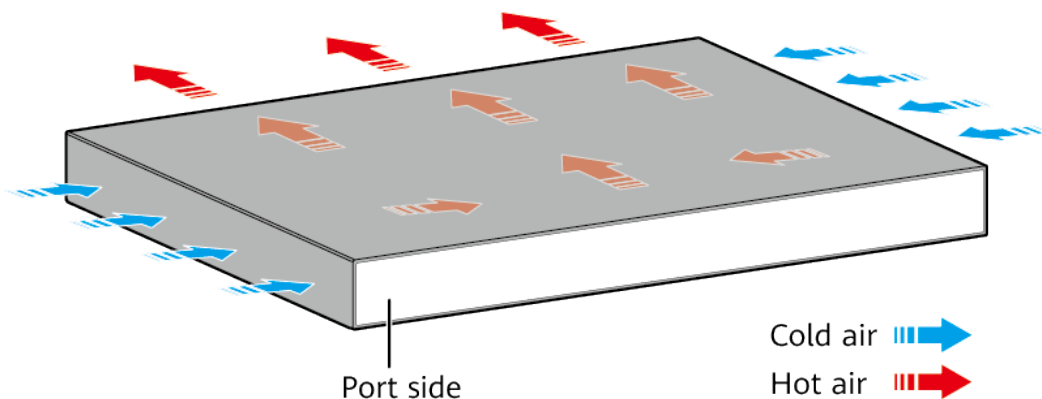
**Figure 4-278** Power supply connections of dual DC PoE power modules



NEG: negative wire      RTN: positive wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5730-68C-PWR-SI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-706** lists technical specifications of the S5730-68C-PWR-SI.

**Table 4-706** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	43.28 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using 500 W AC or 1000 W AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using 650 W DC or 1150 W AC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>● Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 425.0 mm (1.75 in. x 17.4 in. x 16.73 in.)</li> <li>● Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.)</li> </ul> <p>When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 541.1 mm (21.3 in.).</p>
Weight (with packaging)	8 kg (17.64 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>● Using 650 W DC power modules or 500 W AC power modules <ul style="list-style-type: none"> <li>- Not providing the PoE function: 68.3 W (without card)</li> <li>- 100% PoE loads: 925 W (system power consumption: 185.8 W, PoE: 739.2 W, without card)</li> </ul> </li> <li>● Using 1150 W AC power modules or 1000 W AC power modules <ul style="list-style-type: none"> <li>- Not providing the PoE function: 68.3 W (without card)</li> <li>- 100% PoE loads: 1733 W (system power consumption: 293 W, PoE: 1440 W, without card)</li> </ul> </li> </ul>

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	50.1 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.                     The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 64.3 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010779

## 4.15 S5700-EI

### 4.15.1 S5700-28C-EI

#### Version Mapping

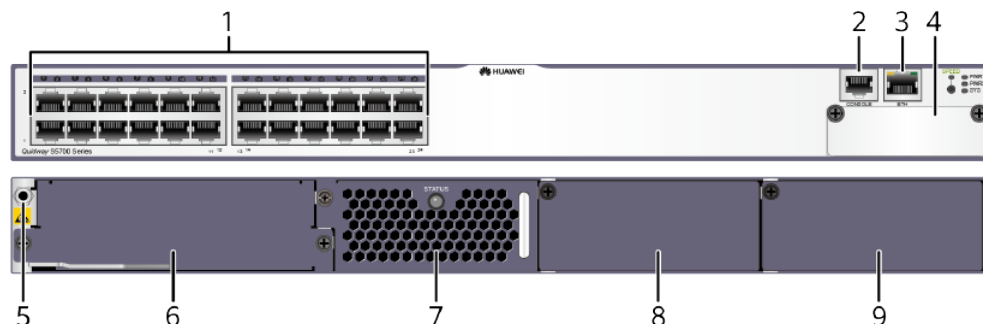
[Table 4-707](#) lists the mapping between the S5700-28C-EI and software versions.

**Table 4-707** Version mapping

Series	Model	Software Version
S5700-EI	S5700-28C-EI	V100R005C01 to V200R005C03 <b>NOTE</b> This model does not match V200R003C02 or V200R003C10.

#### Appearance and Structure

**Figure 4-279** S5700-28C-EI appearance



1	Twenty-four 10/100/1000BASE-T ports	2	One console port
3	One ETH management port	4	Front card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <a href="#">8.5 ES5D000G4S01 (4-Port GE SFP Front Optical Interface Card)</a></li> <li>• <a href="#">8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card)</a></li> <li>• <a href="#">8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)</a></li> </ul>
5	ESD jack <b>NOTE</b> Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	6	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <a href="#">8.30 ES5D00ETPC00 (Stack Rear Card)</a></li> <li>• <a href="#">8.31 ES5D00ETPB00 (Extended Rear Card)</a></li> </ul>
7	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">CX7E1FANA fan module</a>	8	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>
9	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-708](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-708** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-709](#).

**Table 4-709** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 4-710](#) describes the attributes of an ETH management port.

**Table 4-710** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45



Attribute	Description
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

## Indicator Description

Figure 4-280 Indicators on the S5700-28C-EI

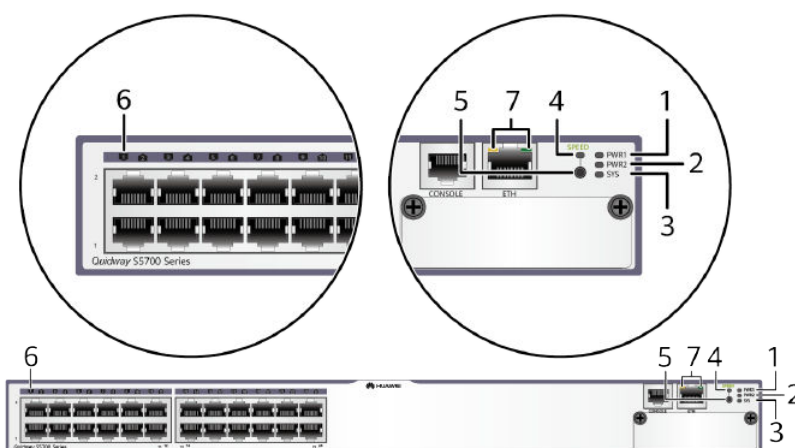


Table 4-711 Indicator Description

No.	Indicator/ Button	Color	Description
1	PWR1: power module indicator	-	Off: No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 1 and is working normally.

No.	Indicator/ Button	Color	Description
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"><li>• A power module is available in this slot but its power switch is in the OFF position.</li><li>• A power module is available in this slot but it is not connected to a power source.</li><li>• The power module in this slot has failed.</li></ul>
2	PWR2: power module indicator	-	Off: No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 2 and is working normally.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"><li>• A power module is available in this slot but its power switch is in the OFF position.</li><li>• A power module is available in this slot but it is not connected to a power source.</li><li>• The power module in this slot has failed.</li></ul>
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"><li>• Steady on: The system is not running normally or is starting.</li><li>• Slow blinking: The system is running normally.</li></ul>
		Yellow	Steady on: The system is performing self-check during startup.

No.	Indicator/ Button	Color	Description
		Red	Steady on: The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	MODE: mode indicator	-	Off: The service port indicators are in the status mode (default). In the status mode, the service port indicator shows the port link or activity state.
		Green	Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
		Red	Steady on: The service port indicators show the stack ID of the switch. After 45 seconds, the service port indicators automatically restore to the status mode.
5	Mode switch button	-	<ul style="list-style-type: none"> <li>When you press this button once, the mode indicator turns green and the service port indicators show the speed of each service port.</li> <li>When you press this button a second time, the mode indicator turns red and the service port indicators show the stack status.</li> <li>When you press this button a third time, the mode indicator turns off.</li> </ul> <p>If you do not press the button within 45 seconds, the mode indicator restores to status mode.</p>
6	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-712</a> .	
7	ETH indicator	-	Off: No link is established on the port.
		Green	Steady on: The port is connected.
		Yellow	Blinking: The port is sending or receiving data.

**Table 4-712** Description of service port indicators in different modes (one indicator for each port)

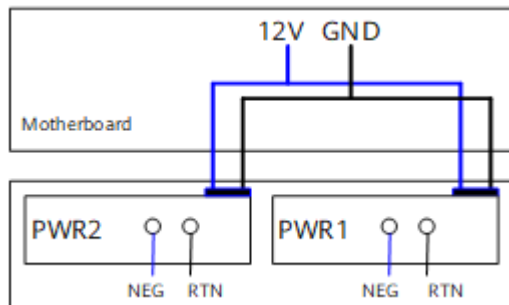
Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5700-28C-EI can use a single power module or double power modules for 1+1 power redundancy. In versions prior to V200R005C00, the AC and DC power modules cannot be configured on the same device, while in V200R005C00 and later versions, they can be configured on the same device.

**Figure 4-281** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-281** Power supply connections of dual DC power modules



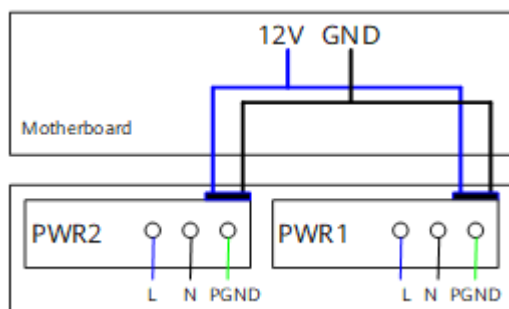
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

**Figure 4-282** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-282** Power supply connections of dual AC power modules



L: Live wire

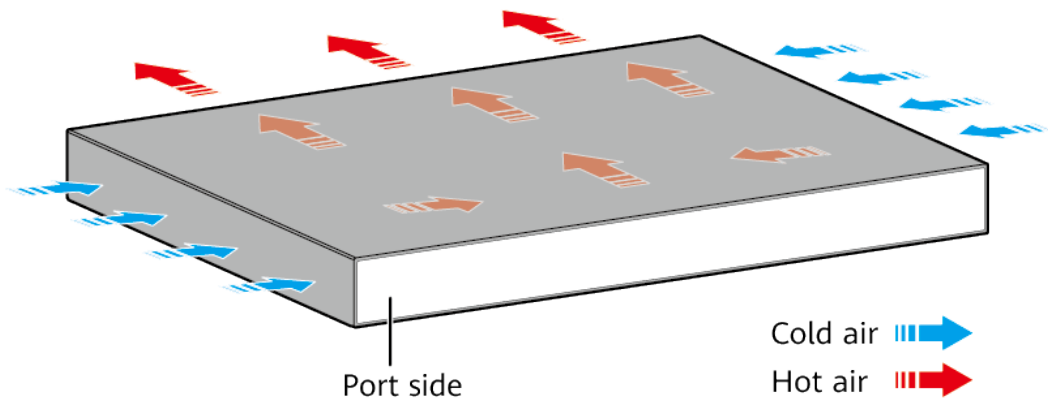
N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

## Heat Dissipation

The S5700-28C-EI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-713** lists technical specifications of the S5700-28C-EI.

**Table 4-713** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	53.11 years when a 2-port 10GE interface card is configured, 68.33 years when a 4-port GE front card is configured, 25.52 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: ±6 kV in differential mode, ±6 kV in common mode</li> <li>Using DC power modules: ±1 kV in differential mode, ±2 kV in common mode</li> </ul>
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> <li>Empty: ≤ 5 kg (11.02 lb)</li> <li>Fully configured: ≤ 8.5 kg (18.74 lb)</li> </ul>
Stack ports	Two stack ports available on each stack card
RPS	Not supported

Item	Description
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	60 W
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 41 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"><li>AC power modules configured: 0-5000 m (0-16404 ft.)</li><li>DC power modules configured: 0-2000 m (0-6562 ft.)</li></ul>
Certification	<ul style="list-style-type: none"><li>EMC certification</li><li>Safety certification</li><li>Manufacturing certification</li></ul>
Part number	02352338

## 4.15.2 S5700-28C-EI-24S

### Version Mapping

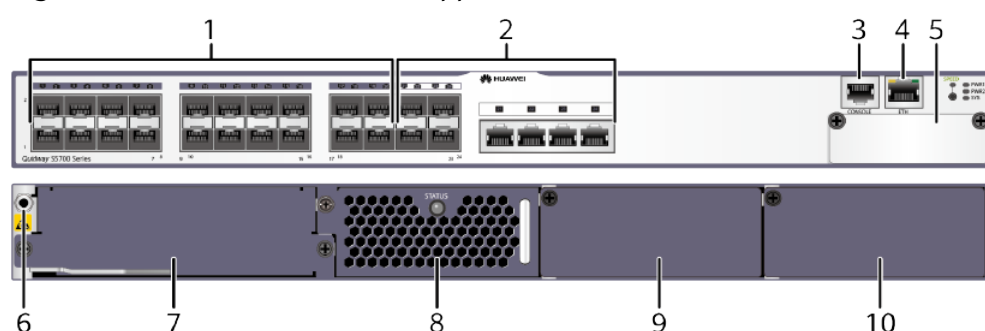
[Table 4-714](#) lists the mapping between the S5700-28C-EI-24S and software versions.

**Table 4-714** Version mapping

Series	Model	Software Version
S5700-EI	S5700-28C-EI-24S	V100R005C01 to V200R005C03 <b>NOTE</b> This model does not match V200R003C02 or V200R003C10.

## Appearance and Structure

**Figure 4-283** S5700-28C-EI-24S appearance



1	<p>Twenty 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE copper module</b></li> </ul>	2	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> </ul>
3	One console port	4	One ETH management port
5	<p>Front card slot</p> <p><b>NOTE</b></p> <p>Card supported:</p> <ul style="list-style-type: none"> <li>• <b>8.5 ES5D000G4S01 (4-Port GE SFP Front Optical Interface Card)</b></li> <li>• <b>8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card)</b></li> <li>• <b>8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)</b></li> </ul>	6	<p>ESD jack</p> <p><b>NOTE</b></p> <p>Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.</p>



7	Rear card slot  <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <a href="#">8.30 ES5D00ETPC00 (Stack Rear Card)</a></li> <li>• <a href="#">8.31 ES5D00ETPB00 (Extended Rear Card)</a></li> </ul>	8	Fan slot  <b>NOTE</b> Applicable fan module: <a href="#">CX7E1FANA fan module</a>
9	Power module slot 2  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	10	Power module slot 1  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-715](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-715** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-716](#).

**Table 4-716** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 4-717](#) describes the attributes of an ETH management port.

**Table 4-717** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

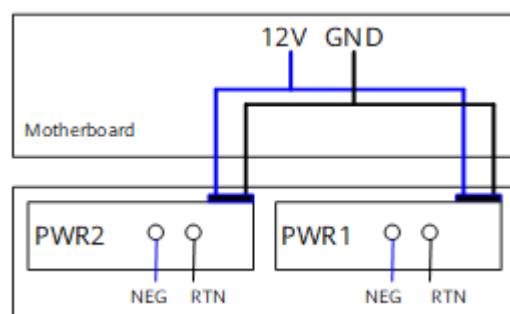
## Indicator Description

The S5700-28C-EI-24S has the same types of indicators as the S5700-28C-EI. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5700-28C-EI-24S can use a single power module or double power modules for 1+1 power redundancy. In versions prior to V200R005C00, the AC and DC power modules cannot be configured on the same device, while in V200R005C00 and later versions, they can be configured on the same device.

[Figure 4-284](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-284** Power supply connections of dual DC power modules

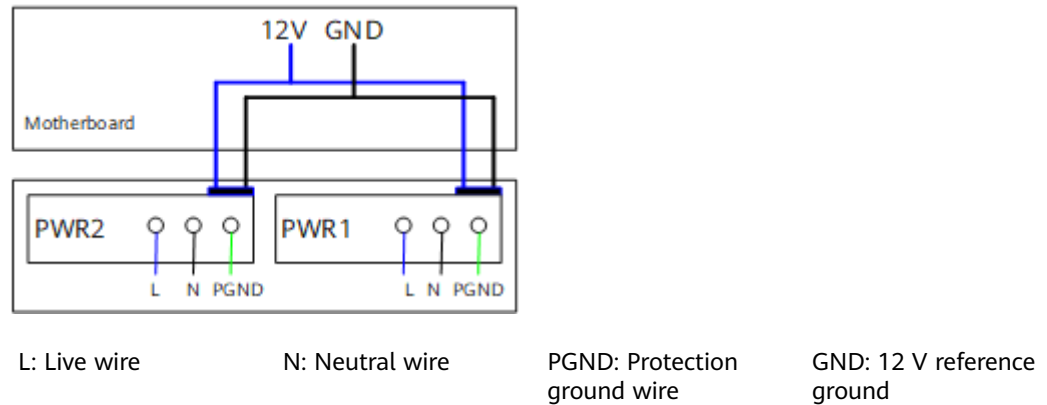
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

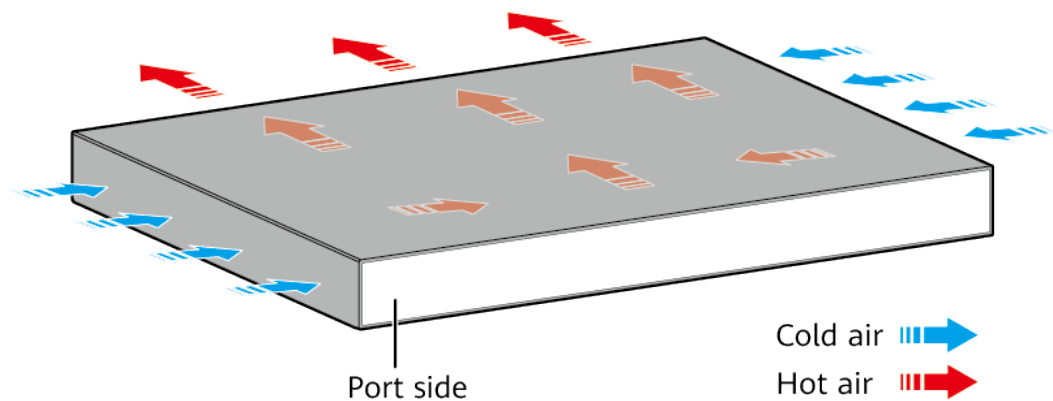
[Figure 4-285](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-285** Power supply connections of dual AC power modules



## Heat Dissipation

The S5700-28C-EI-24S uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-718** lists technical specifications of the S5700-28C-EI-24S.

**Table 4-718** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB

Item	Description
Mean time between failures (MTBF)	52.80 years when no interface card is configured, 41.33 years when a 2-port 10GE interface card is configured, 50.00 years when a 4-port GE front card is configured, 26.52 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: ±6 kV in differential mode, ±6 kV in common mode</li> <li>Using DC power modules: ±1 kV in differential mode, ±2 kV in common mode</li> </ul>
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> <li>Empty: ≤ 5 kg (11.02 lb)</li> <li>Fully configured: ≤ 8.5 kg (18.74 lb)</li> </ul>
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	63 W
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 41 dB(A)

Item	Description
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	02352350

### 4.15.3 S5700-28C-PWR-EI

#### Version Mapping

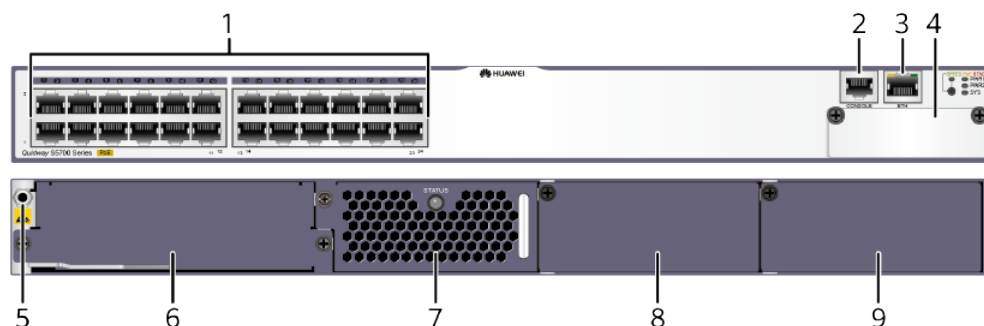
**Table 4-719** lists the mapping between the S5700-28C-PWR-EI and software versions.

**Table 4-719** Version mapping

Series	Model	Software Version
S5700-EI	S5700-28C-PWR-EI	V100R005C01 to V200R005C03 <b>NOTE</b> This model does not match V200R003C02 or V200R003C10.

#### Appearance and Structure

**Figure 4-286** S5700-28C-PWR-EI appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	One console port
---	---	---	------------------

3	One ETH management port	4	Front card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>8.5 ES5D000G4S01 (4-Port GE SFP Front Optical Interface Card)</li> <li>8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card)</li> <li>8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)</li> </ul>
5	ESD jack <b>NOTE</b> Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	6	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>8.30 ES5D00ETPC00 (Stack Rear Card)</li> <li>8.31 ES5D00ETPB00 (Extended Rear Card)</li> </ul>
7	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">CX7E1FANA fan module</a>	8	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>250 W AC PoE power module</li> <li>500 W AC PoE power module</li> </ul>
9	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>250 W AC PoE power module</li> <li>500 W AC PoE power module</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-720](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-720** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-721](#).

**Table 4-721** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 4-722](#) describes the attributes of an ETH management port.

**Table 4-722** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing



Attribute	Description
Maximum transmission distance	100 m

## Indicator Description

Figure 4-287 Indicators on the S5700-28C-PWR-EI

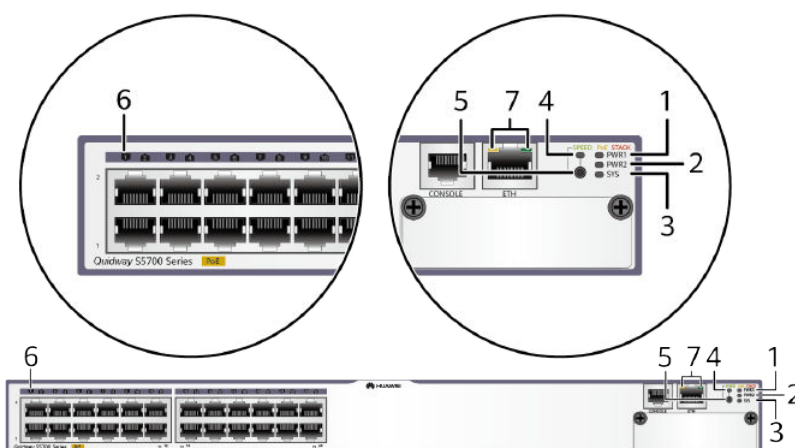


Table 4-723 Description of indicators on the switch

Number	Indicator/ Button	Color	Description
1	PWR1: power supply indicator	-	Off: No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 1 and is working normally.

Number	Indicator/ Button	Color	Description
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>• A power module is available in this slot but its power switch is in the OFF position.</li> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The system power and PoE power are faulty.</li> </ul>
		Yellow	Steady on: If a single power module is installed, the PoE power is out of range. If dual power modules are installed, the system power or PoE power is out of range.
2	PWR2: power supply indicator	-	Off: No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 2 and is working normally.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>• A power module is available in this slot but its power switch is in the OFF position.</li> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The system power and PoE power are faulty.</li> </ul>
		Yellow	Steady on: If a single power module is installed, the PoE power is out of range. If dual power modules are installed, the system power or PoE power is out of range.

Number	Indicator/Button	Color	Description
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"><li>Steady on: The system is not operating properly or is starting.</li><li>Slow blinking: The system is running normally.</li></ul>
		Yellow	Steady on: The system is performing self-check during startup.
		Red	Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.
4	Mode indicator	-	Off: The service port indicators are in the status mode (default). In the status mode, the service port indicator shows the port link or activity state.
		Green	Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
		Red	Steady on: The service port indicators show the stack ID of the switch. After 45 seconds, the service port indicators automatically restore to the status mode.
		Yellow	Steady on: The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

Number	Indicator/Button	Color	Description
5	Mode switch button	-	<ul style="list-style-type: none"> <li>When you press this button once, the mode indicator turns green and the service port indicators show the speed of each service port.</li> <li>When you press this button a second time, the mode indicator turns red and the service port indicators show the stack status.</li> <li>When you press this button a third time, the mode indicator turns yellow and the service port indicators show the PoE status.</li> <li>When you press this button a fourth time, the mode indicator turns off.</li> </ul> <p>If you do not press the button within 45 seconds, the mode indicator restores to status mode.</p>
6	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-724</a> .	
7	ETH indicator	-	Off: No link is established on the port.
		Green	Steady on: The port is connected.
		Yellow	Blinking: The port is sending or receiving data.

**Table 4-724** Description of service port indicators in different modes

Display Mode	Color	Description
Status	Green	<ul style="list-style-type: none"> <li>Off: The port is not connected or has been shut down.</li> <li>Steady on: The port is connected.</li> <li>Blinking: The port is sending or receiving data.</li> </ul>

Display Mode	Color	Description
Speed	Green	<ul style="list-style-type: none"> <li>● Off: The port is not connected or has been shut down.</li> <li>● Steady on:                             <ul style="list-style-type: none"> <li>10M/100M/1000M port: The port is operating at 10/100 Mbit/s.</li> <li>1000M/10GE port: The port is operating at 1000 Mbit/s.</li> </ul> </li> <li>● Blinking:                             <ul style="list-style-type: none"> <li>10M/100M/1000M port: The port is operating at 1000 Mbit/s.</li> <li>1000M/10GE port: The port is operating at 10 Gbit/s.</li> </ul> </li> </ul>
PoE	Green	<ul style="list-style-type: none"> <li>● Off: The port does not provide PoE power.</li> <li>● Steady on: The port is providing PoE power.</li> <li>● Blinking: The PD connected to the port is not a standard PD or its power exceeds the maximum power or power threshold of the port.</li> </ul>
Stack	Green	<ul style="list-style-type: none"> <li>● Off: The STCK mode is not selected.</li> <li>● If the indicator is steady on, the switch is not a master switch:                             <ul style="list-style-type: none"> <li>– If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>– If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul> </li> <li>● If the indicator is blinking, the switch is a master switch:                             <ul style="list-style-type: none"> <li>– If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>– If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul> </li> </ul>

## Power Supply Configuration

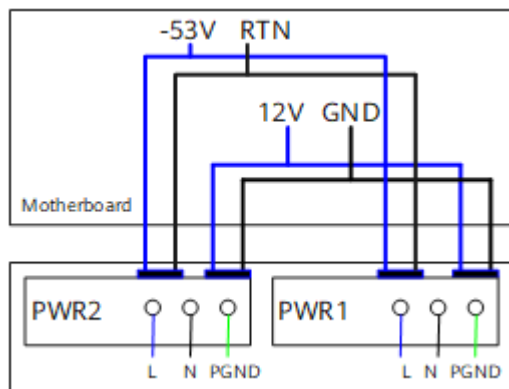
The S5700-28C-PWR-EI is a PoE switch. It has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). [Table 4-725](#) lists its power supply configurations.

**Table 4-725** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	-	123.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 8</li> <li>802.3at (30 W per port): 4</li> </ul>
500 W	-	369.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
250 W	250 W	246.4 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 16</li> <li>802.3at (30 W per port): 8</li> </ul>
500 W	500 W	369.6 W (with PCB of version A for the S5700-28C-PWR-EI)	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
		739.2 W (with PCB of version B for the S5700-28C-PWR-EI)	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>

[Figure 4-288](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

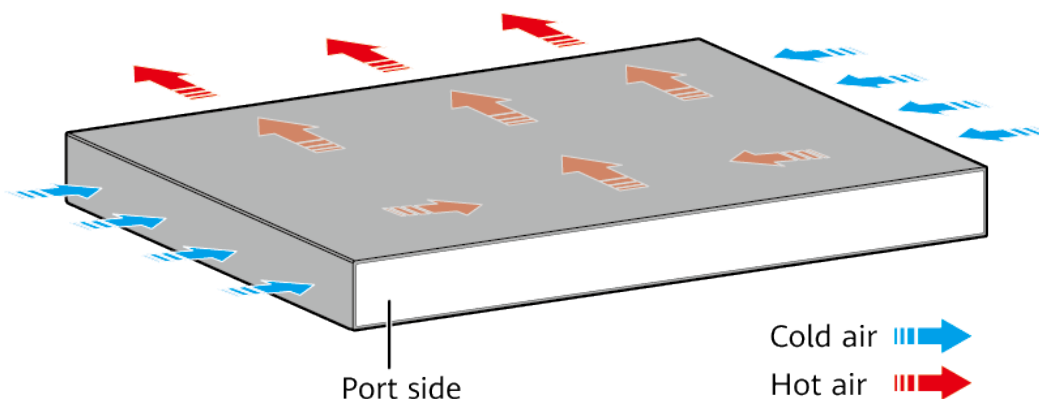
**Figure 4-288** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5700-28C-PWR-EI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-726](#) lists technical specifications of the S5700-28C-PWR-EI.

**Table 4-726** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB

Item	Description
Mean time between failures (MTBF)	52 years when a 2-port 10GE interface card is configured, 55.4 years when a 4-port GE front card is configured, 32.92 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±1 kV in common mode
Power supply surge protection	±2 kV in differential mode, ±4 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> <li>• Empty: ≤ 5 kg (11.02 lb)</li> <li>• Fully configured: ≤ 8.5 kg (18.74 lb)</li> </ul>
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	842 W (system power consumption: 102 W, PoE: 740 W)
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing



Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02352361

## 4.15.4 S5700-52C-EI

### Version Mapping

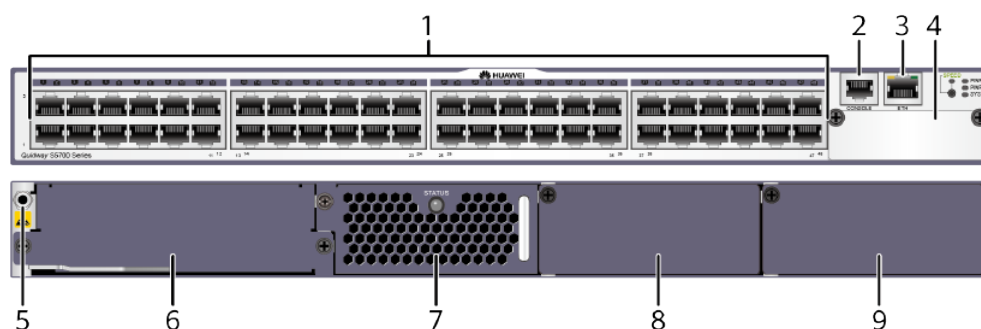
[Table 4-727](#) lists the mapping between the S5700-52C-EI and software versions.

**Table 4-727** Version mapping

Series	Model	Software Version
S5700-EI	S5700-52C-EI	V100R005C01 to V200R005C03 <b>NOTE</b> This model does not match V200R003C02 or V200R003C10.

### Appearance and Structure

**Figure 4-289** S5700-52C-EI appearance



1	Forty-eight 10/100/1000BASE-T ports	2	One console port
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3	One ETH management port	4	Front card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>8.5 ES5D000G4S01 (4-Port GE SFP Front Optical Interface Card)</li> <li>8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card)</li> <li>8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)</li> </ul>
5	ESD jack <b>NOTE</b> Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	6	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>8.30 ES5D00ETPC00 (Stack Rear Card)</li> <li>8.31 ES5D00ETPB00 (Extended Rear Card)</li> </ul>
7	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">CX7E1FANA fan module</a>	8	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>150 W AC power module</li> <li>150 W DC power module</li> </ul>
9	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>150 W AC power module</li> <li>150 W DC power module</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-728](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-728** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-729](#).

**Table 4-729** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 4-730](#) describes the attributes of an ETH management port.

**Table 4-730** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

## Indicator Description

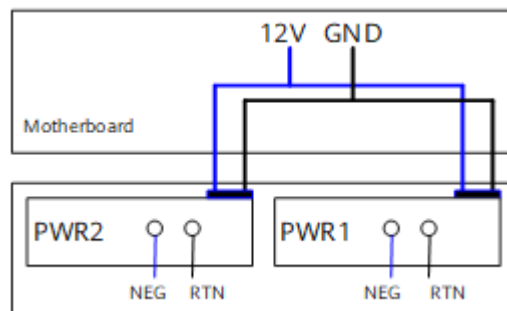
The S5700-52C-EI has the same types of indicators as the S5700-28C-EI. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5700-52C-EI can use a single power module or double power modules for 1+1 power redundancy. In versions prior to V200R005C00, the switch cannot use pluggable AC and DC power modules simultaneously. In V200R005C00 and later versions, the switch supports mixing of pluggable AC and DC power modules.

[Figure 4-290](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-290** Power supply connections of dual DC power modules



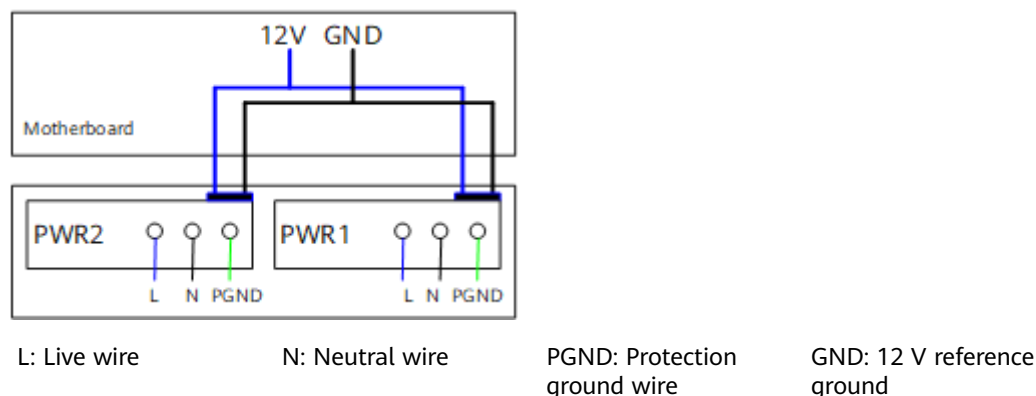
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

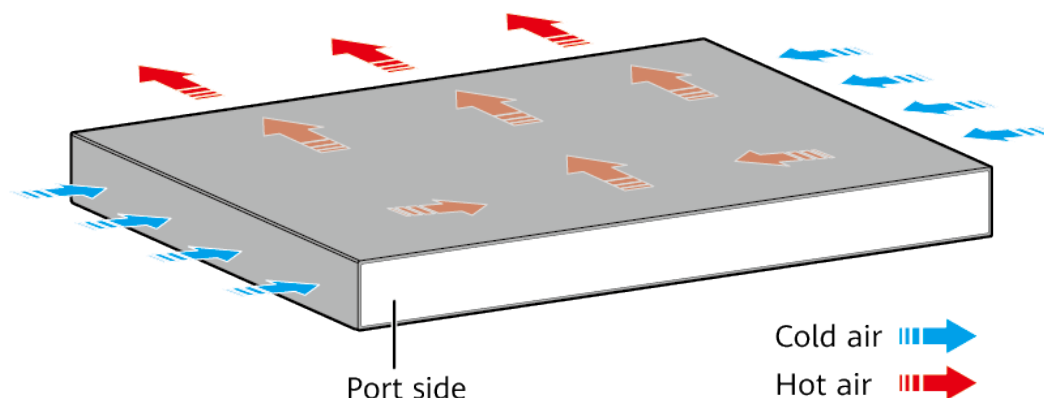
[Figure 4-291](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-291** Power supply connections of dual AC power modules



## Heat Dissipation

The S5700-52C-EI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-731** lists technical specifications of the S5700-52C-EI.

**Table 4-731** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	46.05 years when a 2-port 10GE interface card is configured, 57.08 years when a 4-port GE front card is configured, 25.58 years when a 4x10GE front card is configured

Item	Description
Mean time to repair (MTTR)	2 years
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 2$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> <li>Empty: <math>\leq 5</math> kg (11.02 lb)</li> <li>Fully configured: <math>\leq 8.5</math> kg (18.74 lb)</li> </ul>
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	88 W
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 41 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02352354

## 4.15.5 S5700-52C-PWR-EI

### Version Mapping

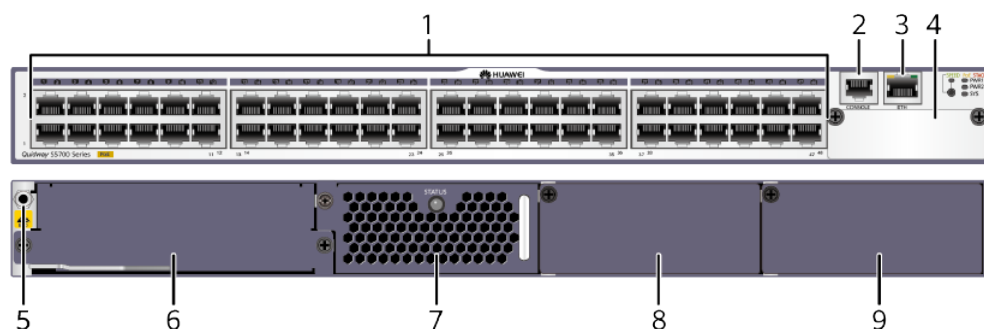
[Table 4-732](#) lists the mapping between the S5700-52C-PWR-EI and software versions.

**Table 4-732** Version mapping

Series	Model	Software Version
S5700-EI	S5700-52C-PWR-EI	V100R005C01 to V200R005C03 <b>NOTE</b> This model does not match V200R003C02 or V200R003C10.

### Appearance and Structure

**Figure 4-292** S5700-52C-PWR-EI appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	One console port
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3	One ETH management port	4	Front card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>8.5 ES5D000G4S01 (4-Port GE SFP Front Optical Interface Card)</li> <li>8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card)</li> <li>8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)</li> </ul>
5	ESD jack <b>NOTE</b> Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	6	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>8.30 ES5D00ETPC00 (Stack Rear Card)</li> <li>8.31 ES5D00ETPB00 (Extended Rear Card)</li> </ul>
7	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">CX7E1FANA fan module</a>	8	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>250 W AC PoE power module</li> <li>500 W AC PoE power module</li> </ul>
9	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>250 W AC PoE power module</li> <li>500 W AC PoE power module</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-733](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-733** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing



Attribute	Description
Maximum transmission distance	100 m

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-734](#).

**Table 4-734** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 4-735](#) describes the attributes of an ETH management port.

**Table 4-735** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

## Indicator Description

The S5700-52C-PWR-EI has the same types of indicators as the S5700-28C-PWR-EI. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5700-52C-PWR-EI is a PoE switch. It has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). [Table 4-736](#) lists its power supply configurations.

**Table 4-736** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	–	123.2 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 8</li><li>• 802.3at (30 W per port): 4</li></ul>
500 W	–	369.6 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 24</li><li>• 802.3at (30 W per port): 12</li></ul>
250 W	250 W	246.4 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 16</li><li>• 802.3at (30 W per port): 8</li></ul>
500 W	500 W	739.2 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 48</li><li>• 802.3at (30 W per port): 24</li></ul>

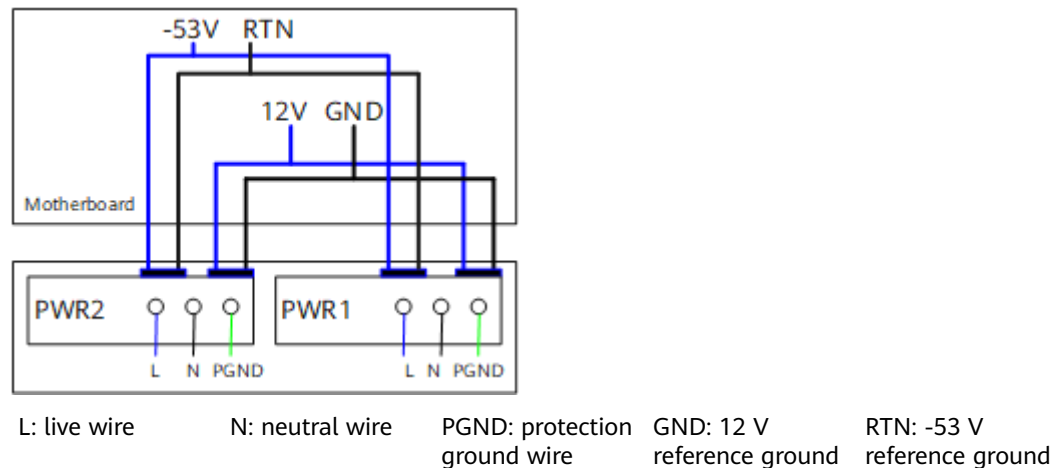
### NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 4-293](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR

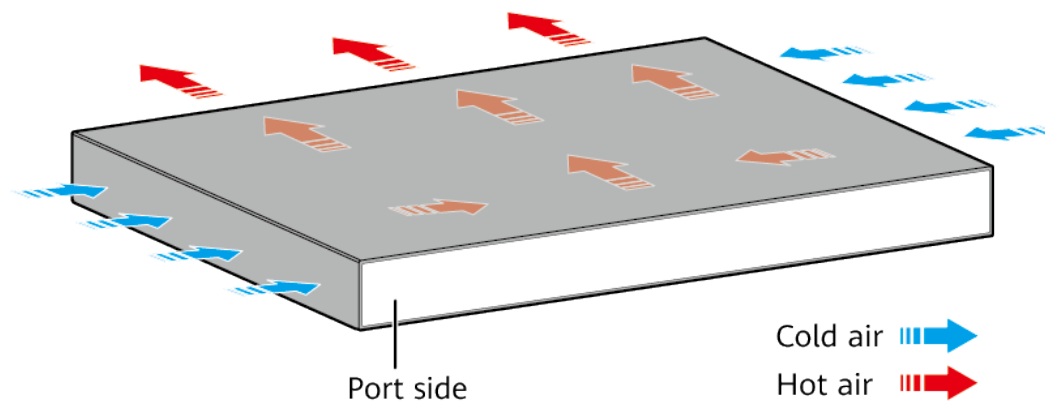
modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

**Figure 4-293** Power supply by dual AC PoE power modules



## Heat Dissipation

The S5700-52C-PWR-EI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-737](#) lists technical specifications of the S5700-52C-PWR-EI.

**Table 4-737** Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	44.8 years when a 2-port 10GE interface card is configured, 66.8 years when a 4-port GE front card is configured, 29.89 years when a 4x10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 1$ kV
Power supply surge protection	$\pm 2$ kV in differential mode, $\pm 4$ kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> <li>• Empty: <math>\leq 5</math> kg (11.02 lb)</li> <li>• Fully configured: <math>\leq 8.5</math> kg (18.74 lb)</li> </ul>
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	930 W (system power consumption: 190 W, PoE: 740 W)
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02352366

## 4.16 S5710-EI

### 4.16.1 S5710-28C-EI

#### Version Mapping

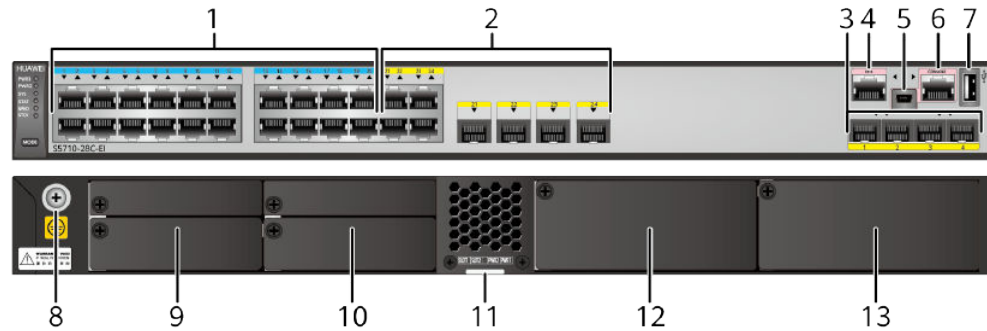
[Table 4-738](#) lists the mapping between the S5710-28C-EI chassis and software versions.

**Table 4-738** Version mapping

Series	Model	Software Version
S5710-EI	S5710-28C-EI	V200R001C00 to V200R005C02 <b>NOTE</b> This model does not match V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

## Appearance and Structure

Figure 4-294 S5710-28C-EI appearance



1	Twenty 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>
3	Four 10GE SFP+ ports  Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module (applicable in V200R005C00)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables (applicable in V200R003C00 and later versions)</b></li> </ul>	4	One ETH management port
5	One mini USB port	6	One console port
7	One USB port	8	Ground screw  <b>NOTE</b> It is used with a <b>ground cable</b> .

9	Rear card slot 1 <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card)</li> <li>8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card)</li> <li>8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)</li> </ul>	10	Rear card slot 2 <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card)</li> <li>8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card)</li> <li>8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)</li> </ul>
11	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.	12	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>150 W AC power module</li> <li>150 W DC power module</li> </ul>
13	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>150 W AC power module</li> <li>150 W DC power module</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 4-739](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-739** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one

internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-740](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-740** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-741](#).



**Table 4-741** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. **Table 4-742** describes the attributes of an ETH management port.

**Table 4-742** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

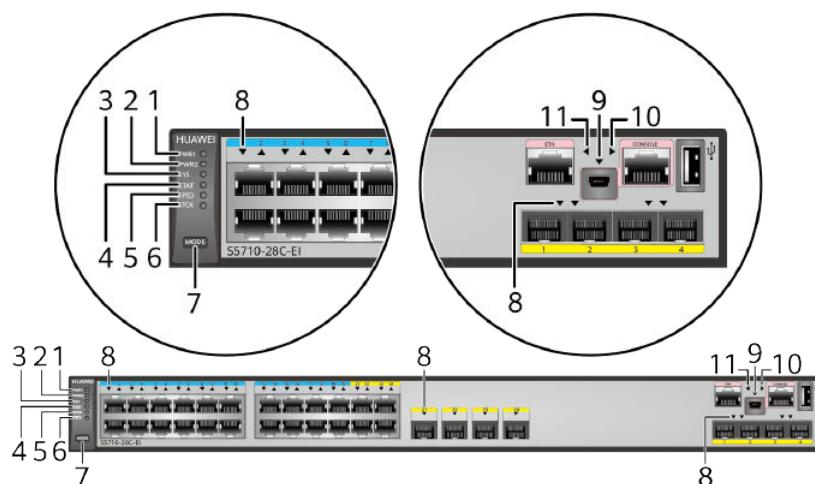
The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

**NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

**Figure 4-295** Indicators on the S5710-28C-EI



**Table 4-743** Description of indicators on the switch

Number	Indicator	Color	Description
1	PWR1: power supply indicator	-	Off: No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 1 and is working normally.

Number	Indicator	Color	Description
		Yellow	<p>Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 1:</p> <ul style="list-style-type: none"> <li>• A power module is available in this slot but its power switch is in the OFF position.</li> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in power module slot 1 fails.</li> </ul>
2	PWR2: power supply indicator	-	Off: No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 2 and is working normally.
		Yellow	<p>Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 2:</p> <ul style="list-style-type: none"> <li>• A power module is available in this slot but its power switch is in the OFF position.</li> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in power module slot 2 fails.</li> </ul>
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> <li>• Fast blinking: The system is starting or is copying the system software and configuration file from a USB flash drive.</li> <li>• Slow blinking: The system is running properly.</li> </ul>

Number	Indicator	Color	Description
		Yellow	Blinking: The system has been successfully upgraded using a USB flash drive and the switch has restarted. You can remove the USB flash drive from the switch.
		Red	<ul style="list-style-type: none"> <li>Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.</li> <li>Blinking: An error occurred during USB-based upgrade and the system failed to be upgraded after a USB flash drive is inserted.</li> </ul>
4	STAT: status indicator	Green	<ul style="list-style-type: none"> <li>Off: The status mode is not selected.</li> <li>Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.</li> </ul>
5	SPED: speed indicator	Green	<ul style="list-style-type: none"> <li>Off: The speed mode is not selected.</li> <li>Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>
6	STCK: stack indicator <b>NOTE</b> This indicator has different states and meanings in different versions. Here are the indicator states and meaning in versions earlier than V200R003C00.	Green	<ul style="list-style-type: none"> <li>Off: The stack mode is not selected.</li> <li>Steady on: The service port indicators show the stack information. After 45 seconds, the service port indicators automatically restore to the status mode.</li> <li>Blinking: The switch is the master switch in a stack or a standalone switch.</li> </ul>

Number	Indicator	Color	Description
	<p>STCK: stack indicator</p> <p><b>NOTE</b>                      This indicator has different states and meanings in different versions. Here are the indicator states and meaning in V200R003C00 and later versions.</p>	Green	<p>If you are not changing the indicator mode (default):</p> <ul style="list-style-type: none"> <li>● Off: The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>● Blinking: The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> </ul> <p>If you are changing the indicator mode:</p> <ul style="list-style-type: none"> <li>● Off: The stack mode is not selected.</li> <li>● Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.</li> <li>● Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

Number	Indicator	Color	Description
7	MODE: mode switch button	-	<ul style="list-style-type: none"><li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li><li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li><li>When you press this button a third time, the STAT indicator turns green and the service port indicators restore to the default mode.</li></ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	Service port indicator <ul style="list-style-type: none"><li>GE electrical ports: The ports are numbered from bottom to top and left to right, starting with 1.</li><li>GE/10GE optical ports: Each port has an indicator above it.</li></ul>		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-744</a> .

Number	Indicator	Color	Description
9	Mini USB indicator	Green	<ul style="list-style-type: none"> <li>Off: The Mini USB port is not active, and the console port is active.</li> <li>Steady on: The Mini USB port is active.</li> </ul> When this indicator is on, the console indicator is off.
10	Console indicator	Green	<ul style="list-style-type: none"> <li>Off: The console port is not active, and the Mini USB port is active.</li> <li>Steady on (default): The console port is active.</li> </ul> When this LED is on, the Mini USB port indicator is off.
11	ETH indicator	Green	<ul style="list-style-type: none"> <li>Off: No link is established on the port.</li> <li>Steady on: The port is connected.</li> <li>Blinking: The port is sending or receiving data.</li> </ul>

**Table 4-744** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.

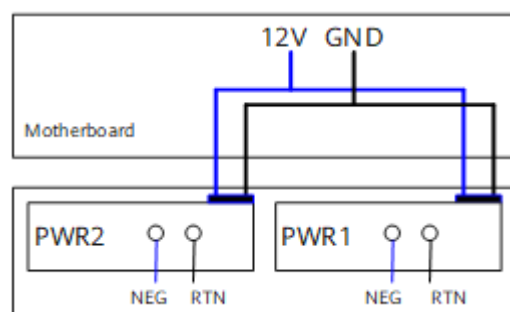
Display Mode	Color	Status	Description
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5710-28C-EI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

**Figure 4-296** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-296** Power supply connections of dual DC power modules



NEG: negative wire

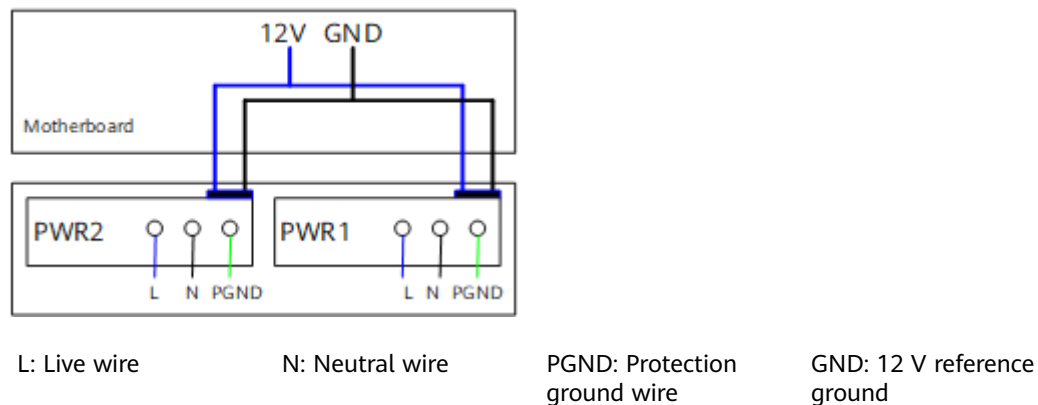
RTN: positive wire

GND: 12 V reference ground



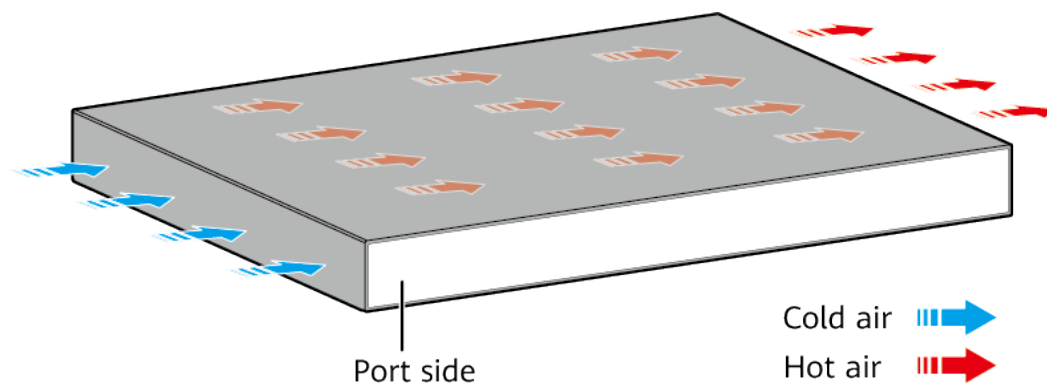
**Figure 4-297** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-297** Power supply connections of dual AC power modules



## Heat Dissipation

The S5710-28C-EI has five built-in fans for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-745** lists technical specifications of the S5710-28C-EI.

**Table 4-745** Technical specifications

Item	Description
Memory (RAM)	512 MB

Item	Description
Flash	<ul style="list-style-type: none"> <li>V200R001: 64 MB</li> <li>V200R002 and later versions: 200 MB</li> </ul>
Mean time between failures (MTBF)	55.98 years when an 8-port GE optical card is configured, 54.93 years when an 8-port GE electrical card is configured, 52.69 years when a 2-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 2$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> <li>Empty: <math>\leq 6</math> kg (13.23 lb)</li> <li>Fully configured: <math>\leq 10</math> kg (22.05 lb)</li> </ul>
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 2-port 10GE rear card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	98 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 53.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	02353170

## 4.16.2 S5710-28C-PWR-EI-AC

### Version Mapping

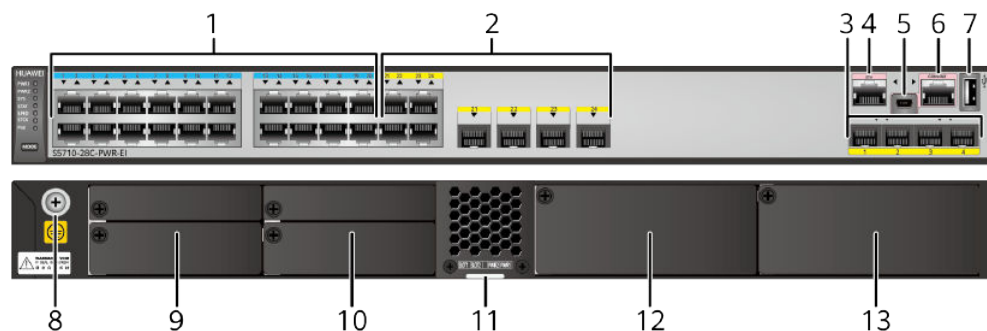
[Table 4-746](#) lists the mapping between the S5710-28C-PWR-EI-AC chassis and software versions.

**Table 4-746** Version mapping

Series	Model	Software Version
S5710-EI	S5710-28C-PWR-EI-AC	V200R002C00 to V200R005C02 <b>NOTE</b> This model does not match V200R003C02, V200R003C10, or V200R005C01.

### Appearance and Structure

**Figure 4-298** S5710-28C-PWR-EI-AC appearance



1	Twenty PoE+ 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>
3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module (applicable in V200R005C00)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables (applicable in V200R003C00 and later versions)</b></li> </ul>	4	One ETH management port
5	One mini USB port	6	One console port
7	One USB port	8	Ground screw  <b>NOTE</b> It is used with a <b>ground cable</b> .
9	Rear card slot 1  <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <b>8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card)</b></li> <li>• <b>8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card)</b></li> <li>• <b>8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)</b></li> </ul>	10	Rear card slot 2  <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <b>8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card)</b></li> <li>• <b>8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card)</b></li> <li>• <b>8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)</b></li> </ul>

1 1	ESN label  <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.	1 2	Power module slot 2  <b>NOTE</b> Applicable power module: • <b>580 W AC PoE power module</b>
1 3	Power module slot 1  <b>NOTE</b> Applicable power module: • <b>580 W AC PoE power module</b>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 4-747](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-747** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

**10GE SFP+ port**

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-748](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-748** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

**Console port**

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-749](#).

**Table 4-749** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 4-750](#) describes the attributes of an ETH management port.

**Table 4-750** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

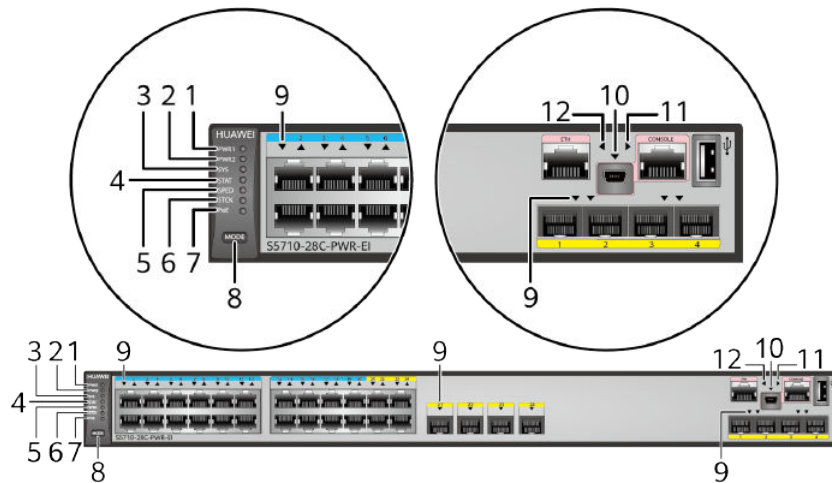
The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

**NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

**Indicator Description**

**Figure 4-299** Indicators on the S5710-28C-PWR-EI-AC



**Table 4-751** Description of indicators on the switch

Number	Indicator	Color	Description
1	PWR1: power supply indicator	-	Off: No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 1 and is working normally.



Number	Indicator	Color	Description
		Yellow	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>• A power module is available in this slot but its power switch is in the OFF position.</li> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in power module slot 1 fails.</li> </ul>
2	PWR2: power supply indicator	-	Off: No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 2 and is working normally.
		Yellow	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>• A power module is available in this slot but its power switch is in the OFF position.</li> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in power module slot 2 fails.</li> </ul>
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> <li>• Fast blinking: The system is starting or is copying the system software and configuration file from a USB flash drive.</li> <li>• Slow blinking: The system is running properly.</li> </ul>

Number	Indicator	Color	Description
		Yellow	Blinking: The system has been successfully upgraded using a USB flash drive and the switch has restarted. You can remove the USB flash drive from the switch.
		Red	<ul style="list-style-type: none"> <li>Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.</li> <li>Blinking: An error occurred during USB-based upgrade and the system failed to be upgraded after a USB flash drive is inserted.</li> </ul>
4	STAT: status indicator	Green	<ul style="list-style-type: none"> <li>Off: The status mode is not selected.</li> <li>Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.</li> </ul>
5	SPED: speed indicator	Green	<ul style="list-style-type: none"> <li>Off: The speed mode is not selected.</li> <li>Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>
6	STCK: stack indicator <b>NOTE</b> This indicator has different states and meanings in different versions. Here are the indicator states and meaning in versions earlier than V200R003C00.	Green	<ul style="list-style-type: none"> <li>Off: The stack mode is not selected.</li> <li>Steady on: The service port indicators show the stack information. After 45 seconds, the service port indicators automatically restore to the status mode.</li> <li>Blinking: The switch is the master switch in a stack or a standalone switch.</li> </ul>

Number	Indicator	Color	Description
	STCK: stack indicator <b>NOTE</b> This indicator has different states and meanings in different versions. Here are the indicator states and meaning in V200R003C00 and later versions.	Green	<p>If you are not changing the indicator mode (default):</p> <ul style="list-style-type: none"><li>• Off: The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li><li>• Blinking: The switch is a stack master switch or a standalone switch with the stacking function enabled.</li></ul> <p>If you are changing the indicator mode:</p> <ul style="list-style-type: none"><li>• Off: The stack mode is not selected.</li><li>• Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.</li><li>• Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li></ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE: PoE indicator	Green	<ul style="list-style-type: none"><li>• Off: The PoE mode is not selected.</li><li>• Steady on: The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.</li></ul>

Number	Indicator	Color	Description
8	MODE: mode switch button	-	<ul style="list-style-type: none"><li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li><li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li><li>When you press this button a third time, the service port indicators change to PoE mode and show the PoE status of ports.</li><li>When you press this button a fourth time, the STAT indicator turns green and the service port indicators restore to the default mode.</li></ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	Service port indicator <ul style="list-style-type: none"><li>GE electrical ports: The ports are numbered from bottom to top and left to right, starting with 1.</li><li>GE/10GE optical ports: Each port has an indicator above it.</li></ul>		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-752</a> .

Number	Indicator	Color	Description
10	Mini USB indicator	Green	<ul style="list-style-type: none"> <li>Off: The Mini USB port is not active, and the console port is active.</li> <li>Steady on: The Mini USB port is active.</li> </ul> <p>When this indicator is on, the console indicator is off.</p>
11	Console indicator	Green	<ul style="list-style-type: none"> <li>Off: The console port is not active, and the Mini USB port is active.</li> <li>Steady on (default): The console port is active.</li> </ul> <p>When this LED is on, the Mini USB port indicator is off.</p>
12	ETH indicator	Green	<ul style="list-style-type: none"> <li>Off: No link is established on the port.</li> <li>Steady on: The port is connected.</li> <li>Blinking: The port is sending or receiving data.</li> </ul>

**Table 4-752** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	<p>10M/100M/1000M port: The port is operating at 10/100 Mbit/s.</p> <p>1000M/10GE port: The port is operating at 1000 Mbit/s.</p>

Display Mode	Color	Status	Description
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> <li>• The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.</li> <li>• The total power consumption of PDs has reached the maximum power of the switch.</li> <li>• The manual power management mode is used and the port is not enabled to provide power to the PD.</li> </ul>
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>• If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5710-28C-PWR-EI-AC is a PoE switch and uses 580 W AC PoE power modules. It has two power module slots. [Table 4-753](#) lists its power supply configurations.

**Table 4-753** Power supply configurations

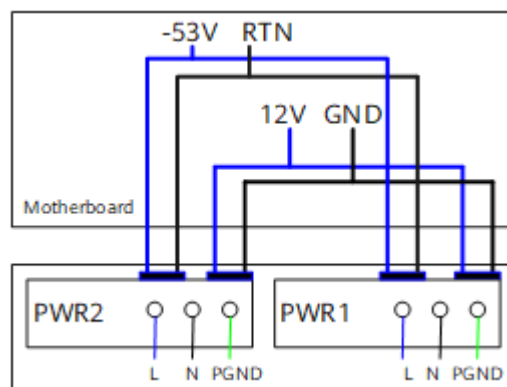
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
580 W	–	369.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
580 W	580 W	739.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>

### NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 4-300](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

**Figure 4-300** Power supply by dual AC PoE power modules



L: live wire

N: neutral wire

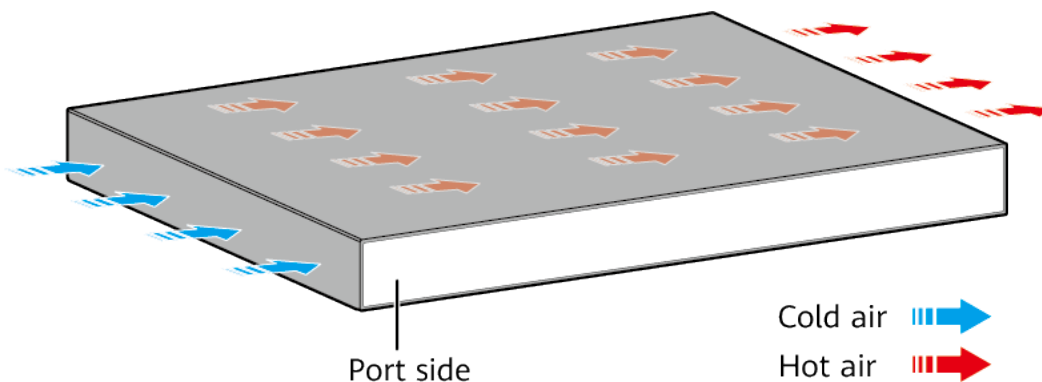
PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

## Heat Dissipation

The S5710-28C-PWR-EI-AC has five built-in fans for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-754](#) lists technical specifications of the S5710-28C-PWR-EI-AC.

**Table 4-754** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	200 MB
Mean time between failures (MTBF)	51.28 years when an 8-port GE optical card is configured, 50.31 years when an 8-port GE electrical card is configured, 48.25 years when a 2-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 1$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> <li>Empty: <math>\leq 6</math> kg (13.23 lb)</li> <li>Fully configured: <math>\leq 10</math> kg (22.05 lb)</li> </ul>
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 2-port 10GE rear card



Item	Description
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	<ul style="list-style-type: none"> <li>No card: 920 W (system power consumption: 180 W, PoE: 740 W)</li> <li>Two 8-port GE electrical card: 934 W (system power consumption: 194 W, PoE: 740 W)</li> <li>Two 8-port GE optical card: 942 W (system power consumption: 202 W, PoE: 740 W)</li> <li>Two 2-port 10GE optical card: 941 W (system power consumption: 201 W, PoE: 740 W)</li> </ul>
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 59.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	02354038

### 4.16.3 S5710-52C-EI

## Version Mapping

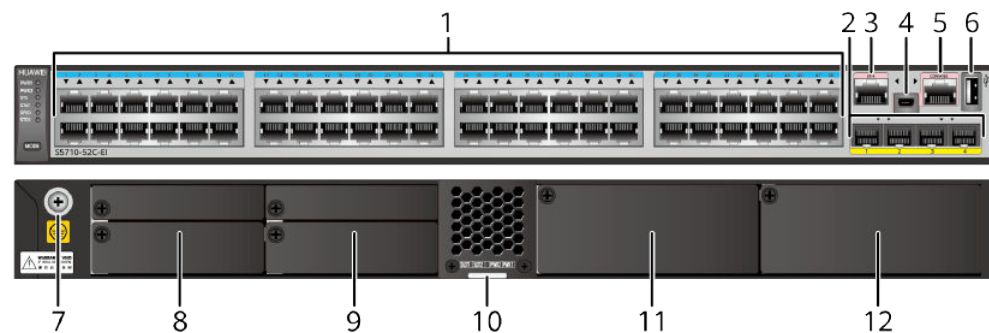
**Table 4-755** lists the mapping between the S5710-52C-EI chassis and software versions.

**Table 4-755** Version mapping

Series	Model	Software Version
S5710-EI	S5710-52C-EI	V200R001C00 to V200R005C02 <b>NOTE</b> This model does not match V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

## Appearance and Structure

**Figure 4-301** S5710-52C-EI appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module (applicable in V200R005C00)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables (applicable in V200R003C00 and later versions)</b></li> </ul>
3	One ETH management port	4	One mini USB port

5	One console port	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Rear card slot 1 <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <a href="#">8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card)</a></li> <li>• <a href="#">8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card)</a></li> <li>• <a href="#">8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)</a></li> </ul>
9	Rear card slot 2 <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <a href="#">8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card)</a></li> <li>• <a href="#">8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card)</a></li> <li>• <a href="#">8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)</a></li> </ul>	10	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
11	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	12	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-756](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-756** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-757](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-757** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-758](#).

**Table 4-758** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 4-759](#) describes the attributes of an ETH management port.

**Table 4-759** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

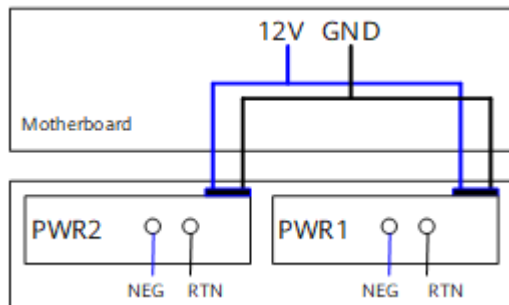
The S5710-52C-EI has the same types of indicators as the S5710-28C-EI. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5710-52C-EI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

**Figure 4-302** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-302** Power supply connections of dual DC power modules



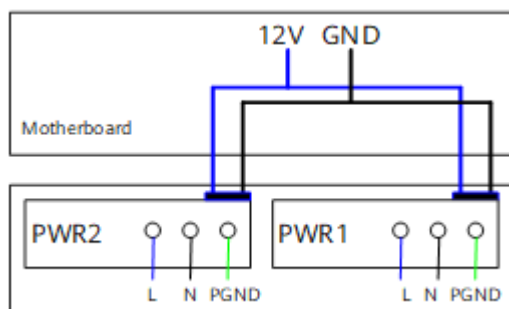
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

**Figure 4-303** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-303** Power supply connections of dual AC power modules



L: Live wire

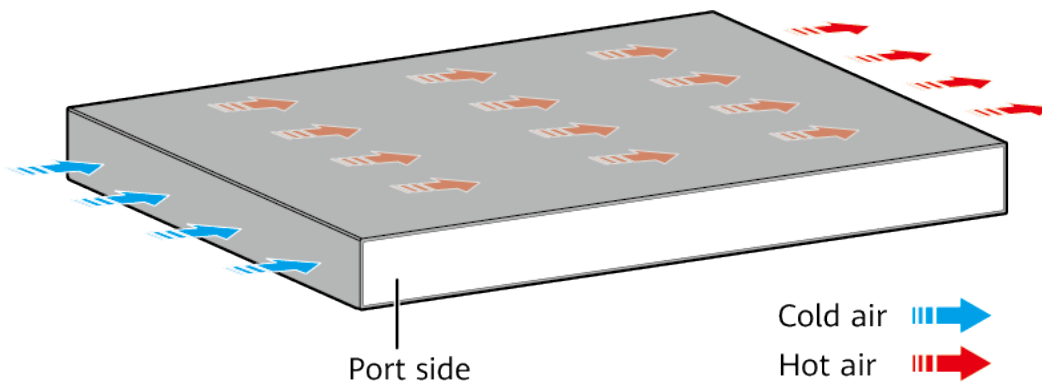
N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

## Heat Dissipation

The S5710-52C-EI has five built-in fans for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-760** lists technical specifications of the S5710-52C-EI.

**Table 4-760** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	<ul style="list-style-type: none"> <li>V200R001: 64 MB</li> <li>V200R002 and later versions: 200 MB</li> </ul>
Mean time between failures (MTBF)	45.57 years when an 8-port GE optical card is configured, 44.85 years when an 8-port GE electrical card is configured, 43.33 years when a 2-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 2$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> <li>Empty: <math>\leq 6</math> kg (13.23 lb)</li> <li>Fully configured: <math>\leq 10</math> kg (22.05 lb)</li> </ul>
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 2-port 10GE rear card

Item	Description
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	146.9 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"><li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li><li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li></ul>
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02353169

## 4.16.4 S5710-52C-PWR-EI

### Version Mapping

[Table 4-761](#) lists the mapping between the S5710-52C-PWR-EI chassis and software versions.

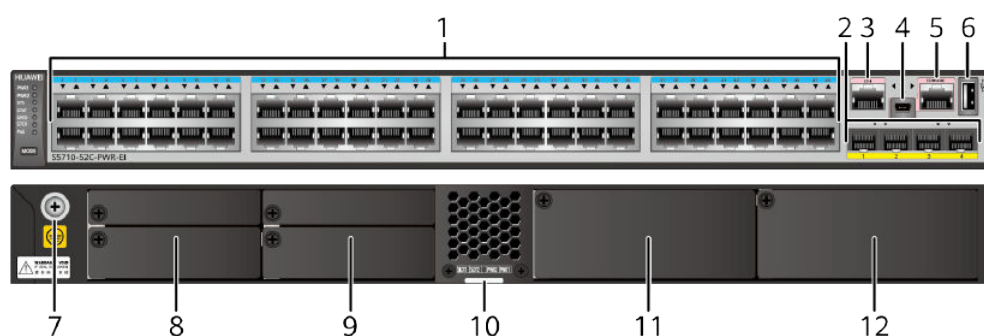


**Table 4-761** Version mapping

Series	Model	Software Version
S5710-EI	S5710-52C-PWR-EI	V200R002C00 to V200R005C02 <b>NOTE</b> This model does not match V200R003C02, V200R003C10, or V200R005C01.

## Appearance and Structure

**Figure 4-304** S5710-52C-PWR-EI appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module (applicable in V200R005C00)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables (applicable in V200R003C00 and later versions)</b></li> </ul>
3	One ETH management port	4	One mini USB port
5	One console port	6	One USB port

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Rear card slot 1</p> <p><b>NOTE</b> Card supported:</p> <ul style="list-style-type: none"> <li>• <a href="#">8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card)</a></li> <li>• <a href="#">8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card)</a></li> <li>• <a href="#">8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)</a></li> </ul>
9	<p>Rear card slot 2</p> <p><b>NOTE</b> Card supported:</p> <ul style="list-style-type: none"> <li>• <a href="#">8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card)</a></li> <li>• <a href="#">8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card)</a></li> <li>• <a href="#">8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)</a></li> </ul>	10	<p>ESN label</p> <p><b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.</p>
11	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">580 W AC PoE power module</a></li> <li>• <a href="#">1150 W AC PoE power module</a></li> </ul>	12	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">580 W AC PoE power module</a></li> <li>• <a href="#">1150 W AC PoE power module</a></li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-762](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-762** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-763](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-763** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-764](#).

**Table 4-764** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the

software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 4-765](#) describes the attributes of an ETH management port.

**Table 4-765** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5710-52C-PWR-EI has the same types of indicators as the S5710-28C-PWR-EI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5710-52C-PWR-EI is a PoE switch and uses 580 W or 1150 W AC PoE power modules. It has two power module slots. [Table 4-766](#) lists its power supply configurations.

**Table 4-766** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
580 W	–	369.6 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 24</li><li>802.3at (30 W per port): 12</li></ul>

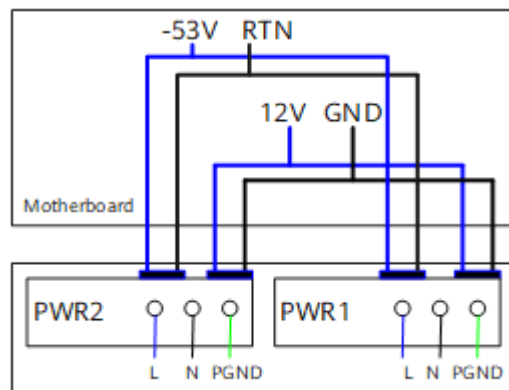
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
580 W	580 W	739.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 24</li> </ul>
1150 W	-	785.4 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 26</li> </ul>
1150 W	1150 W	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>

**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

**Figure 4-305** shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

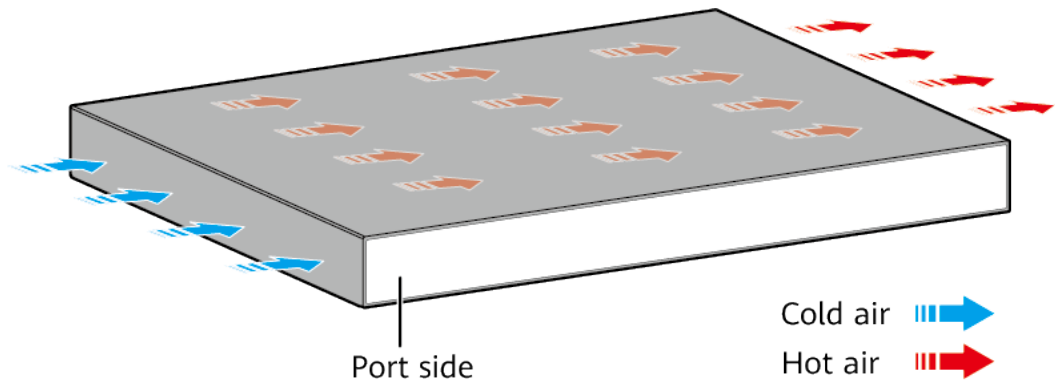
**Figure 4-305** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5710-52C-PWR-EI has five built-in fans for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-767](#) lists technical specifications of the S5710-52C-PWR-EI.

**Table 4-767** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	200 MB
Mean time between failures (MTBF)	36.86 years when an 8-port GE optical card is configured, 36.35 years when an 8-port GE electrical card is configured, 35.27 years when a 2-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 1$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using 580 W AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using 1150 W AC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.) When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 507.3 mm (19.97 in.).

Item	Description
Weight	<ul style="list-style-type: none"> <li>Empty: ≤ 6 kg (13.23 lb)</li> <li>Fully configured: ≤ 10 kg (22.05 lb)</li> </ul>
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 2-port 10GE rear card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	<p>Using two 580 W power modules</p> <ul style="list-style-type: none"> <li>No card: 1023 W (system power consumption: 283 W, PoE: 740 W)</li> <li>Two 8-port GE electrical card: 1035 W (system power consumption: 295 W, PoE: 740 W)</li> <li>Two 8-port GE optical card: 1043 W (system power consumption: 303 W, PoE: 740 W)</li> <li>Two 2-port 10GE optical card: 1040 W (system power consumption: 300 W, PoE: 740 W)</li> </ul> <p>Using two 1150 W power modules</p> <ul style="list-style-type: none"> <li>No card: 1605 W (system power consumption: 165 W, PoE: 1440 W)</li> <li>Two 8-port GE electrical card: 1625 W (system power consumption: 185 W, PoE: 1440 W)</li> <li>Two 8-port GE optical card: 1635 W (system power consumption: 195 W, PoE: 1440 W)</li> <li>Two 2-port 10GE optical card: 1633 W (system power consumption: 193 W, PoE: 1440 W)</li> </ul>
Operating temperature	<p>0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 60 dB(A)

Item	Description
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02355886

## 4.16.5 S5710-52C-PWR-EI-AC

### Version Mapping

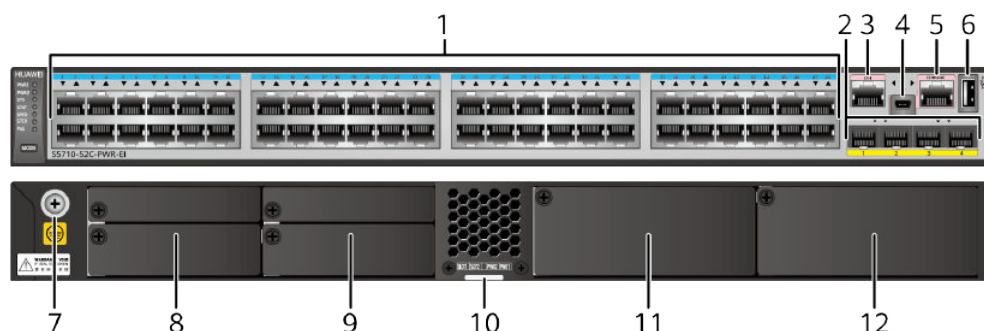
**Table 4-768** lists the mapping between the S5710-52C-PWR-EI-AC chassis and software versions.

**Table 4-768** Version mapping

Series	Model	Software Version
S5710-EI	S5710-52C-PWR-EI-AC	V200R002C00 to V200R005C02 <b>NOTE</b> This model does not match V200R003C02, V200R003C10, or V200R005C01.

### Appearance and Structure

**Figure 4-306** S5710-52C-PWR-EI-AC appearance





1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module (applicable in V200R005C00)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables (applicable in V200R003C00 and later versions)</b></li> </ul>
3	One ETH management port	4	One mini USB port
5	One console port	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	8	Rear card slot 1 <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <b>8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card)</b></li> <li>• <b>8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card)</b></li> <li>• <b>8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)</b></li> </ul>
9	Rear card slot 2 <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <b>8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card)</b></li> <li>• <b>8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card)</b></li> <li>• <b>8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)</b></li> </ul>	10	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
11	Power module slot 2 <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <b>580 W AC PoE power module</b></li> </ul>	12	Power module slot 1 <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <b>580 W AC PoE power module</b></li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-769](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-769** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-770](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-770** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-771](#).

**Table 4-771** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. **Table 4-772** describes the attributes of an ETH management port.

**Table 4-772** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5710-52C-PWR-EI-AC has the same types of indicators as the S5710-28C-PWR-EI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5710-52C-PWR-EI-AC is a PoE switch and uses 580 W AC PoE power modules. It has two power module slots. [Table 4-773](#) lists its power supply configurations.

**Table 4-773** Power supply configurations

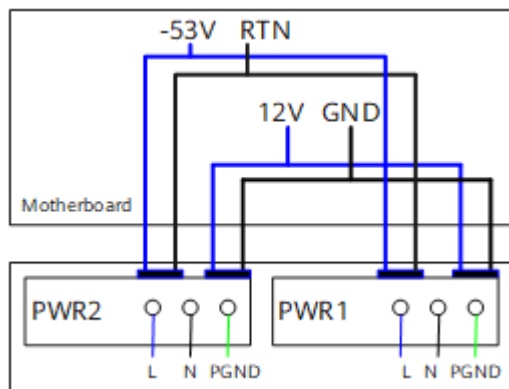
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
580 W	–	369.6 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 24</li><li>802.3at (30 W per port): 12</li></ul>
580 W	580 W	739.2 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 48</li><li>802.3at (30 W per port): 24</li></ul>

 NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 4-307](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

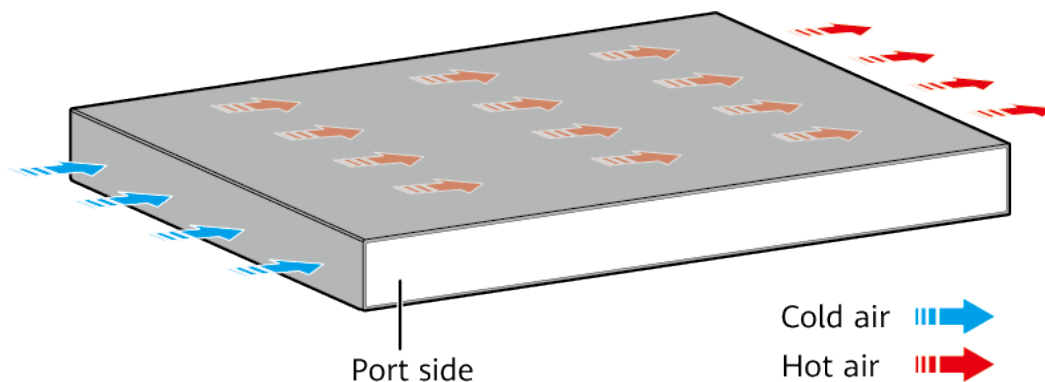
**Figure 4-307** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5710-52C-PWR-EI-AC has five built-in fans for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-774](#) lists technical specifications of the S5710-52C-PWR-EI-AC.

**Table 4-774** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	200 MB

Item	Description
Mean time between failures (MTBF)	36.86 years when an 8-port GE optical card is configured, 36.35 years when an 8-port GE electrical card is configured, 35.27 years when a 2-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 1$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> <li>Empty: <math>\leq 6</math> kg (13.23 lb)</li> <li>Fully configured: <math>\leq 10</math> kg (22.05 lb)</li> </ul>
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 2-port 10GE rear card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	<ul style="list-style-type: none"> <li>No card: 1023 W (system power consumption: 283 W, PoE: 740 W)</li> <li>Two 8-port GE electrical card: 1035 W (system power consumption: 295 W, PoE: 740 W)</li> <li>Two 8-port GE optical card: 1043 W (system power consumption: 303 W, PoE: 740 W)</li> <li>Two 2-port 10GE optical card: 1040 W (system power consumption: 300 W, PoE: 740 W)</li> </ul>
Operating temperature	<p>0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 60 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02354042

## 4.17 S5720-EI

### 4.17.1 S5720-36C-EI-AC

#### Version Mapping

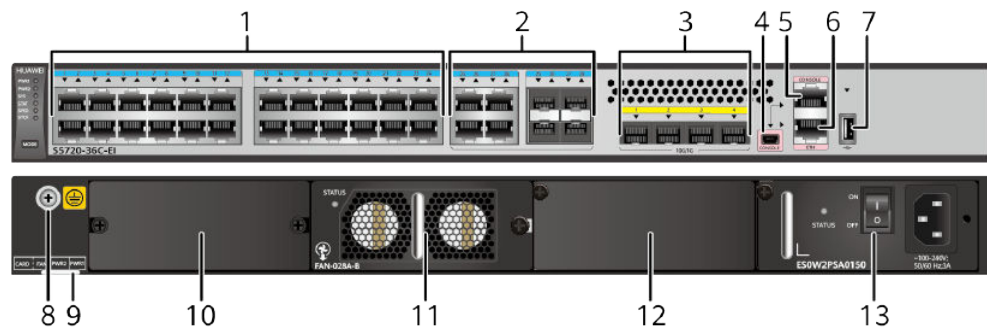
[Table 4-775](#) lists the mapping between the S5720-36C-EI-AC chassis and software versions.

**Table 4-775** Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-36C-EI-AC	V200R007C00 to V200R019C10 versions <b>NOTE</b> This model does not match V200R007C10.

## Appearance and Structure

Figure 4-308 S5720-36C-EI-AC appearance



1	<p>Twenty-four 10/100/1000BASE-T ports</p>	2	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>	4	<p>One mini USB port</p>



5	One console port <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One ETH management port
7	One USB port	8	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .
9	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.	10	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <a href="#">8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series)</a></li> <li>• <a href="#">8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series)</a></li> <li>• <a href="#">8.29 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)</a></li> </ul>
11	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">7.2 FAN-028A-B Fan Module</a>	12	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>
13	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-776](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-776** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-777](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-777** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-778](#).

**Table 4-778** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-779](#) describes the attributes of an ETH management port.

**Table 4-779** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

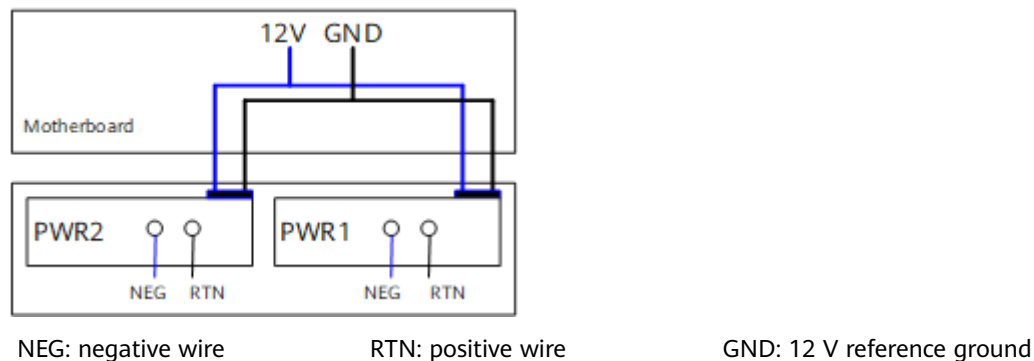
The S5720-36C-EI-AC has similar indicators to those on the S5720-36C-PWR-EI-AC, except that the S5720-36C-EI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-36C-EI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

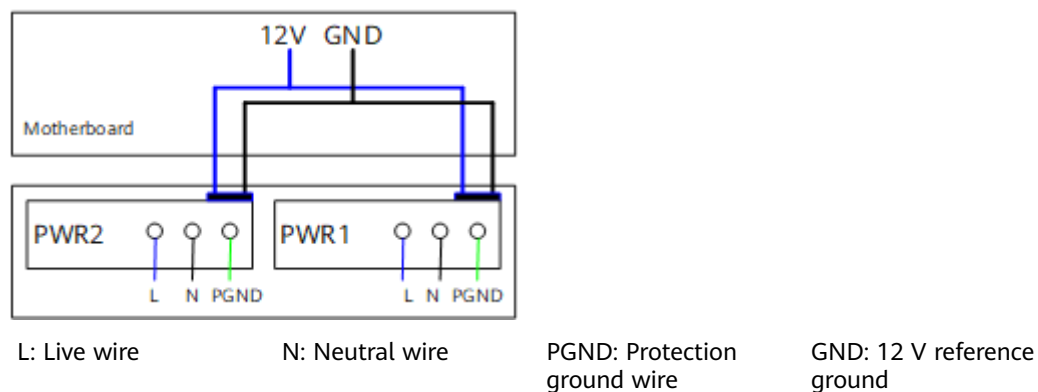
[Figure 4-309](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-309** Power supply connections of dual DC power modules



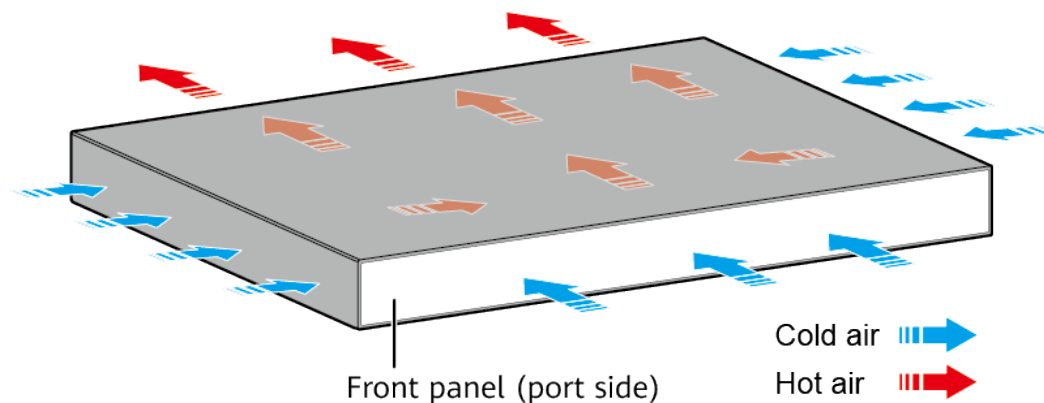
**Figure 4-310** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-310** Power supply connections of dual AC power modules



## Heat Dissipation

The S5720-36C-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-780** lists technical specifications of the S5720-36C-EI-AC.

**Table 4-780** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	80.05 years when no card is configured; 73.65 years when a 2-port 10GE SFP+ interface card is configured; 71.58 years when a 2-port 10GE RJ45 interface card is configured; 71.74 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> <li>Service ports on front panel: <math>\pm 6</math> kV in common mode</li> <li>Ports on the 2-port 10GE RJ45 rear interface card: <math>\pm 2</math> kV in common mode</li> </ul>
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	9.8 kg (21.61 lb)
Stack ports	<ul style="list-style-type: none"> <li>Ports on the 2-port 10GE SFP+ rear interface card</li> <li>Ports on the 2-port 10GE RJ45 rear interface card</li> <li>Ports on the 2-port QSFP+ rear stack card</li> </ul>
RTC	Supported
RPS	Not supported

Item	Description
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	75.8 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"><li>• Tested according to ATIS standard</li><li>• EEE enabled</li><li>• No PoE power consumption</li></ul>	<ul style="list-style-type: none"><li>• 39.5 W (without subcard)</li><li>• 47.28 W (with 2*10G optical subcards)</li><li>• 52.17 W (2*QSFP+ stack cards)</li><li>• 55.14 W (with 2*10G electrical subcards)</li></ul>
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02359562

## 4.17.2 S5720-36C-EI-DC

### Version Mapping

[Table 4-781](#) lists the mapping between the S5720-36C-EI-DC chassis and software versions.

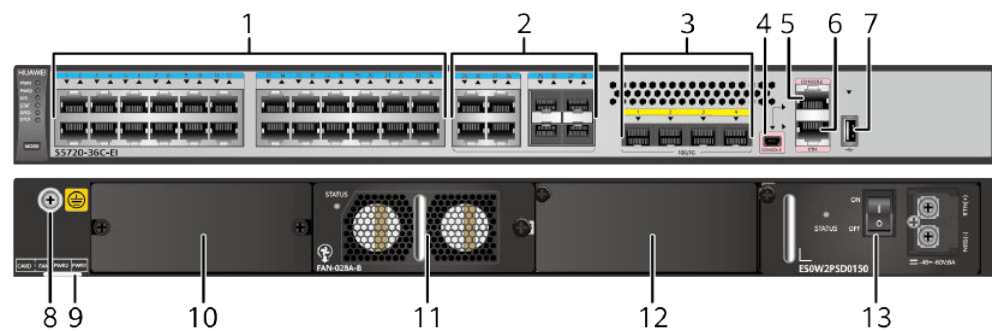


**Table 4-781** Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-36C-EI-DC	V200R009C00 to V200R019C10 versions

## Appearance and Structure

**Figure 4-311** S5720-36C-EI-DC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>● FE optical module</li> <li>● GE optical module</li> <li>● GE-CWDM optical module</li> <li>● GE-DWDM optical module</li> </ul>
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>	4	One mini USB port
5	<p>One console port</p> <p><b>NOTE</b></p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One ETH management port
7	One USB port	8	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>
9	<p>ESN label</p> <p><b>NOTE</b></p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>	10	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Card supported:</p> <ul style="list-style-type: none"> <li>• <b>8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series)</b></li> <li>• <b>8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series)</b></li> <li>• <b>8.29 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)</b></li> </ul>

1 1	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">7.2 FAN-028A-B Fan Module</a>	1 2	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>
1 3	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-782](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-782** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

**10GE SFP+ port**

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-783](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-783** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

**Console port**

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-784](#).

**Table 4-784** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-785](#) describes the attributes of an ETH management port.

**Table 4-785** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not

support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

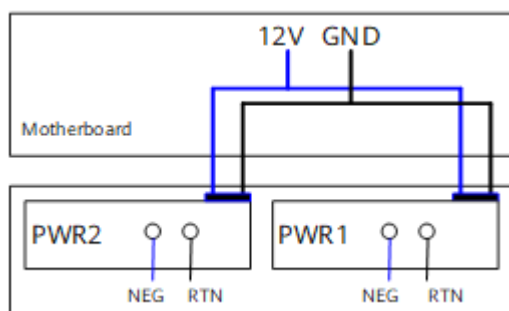
The S5720-36C-EI-DC has similar indicators to those on the S5720-36C-PWR-EI-AC, except that the S5720-56C-EI-DC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-36C-EI-DC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 4-312](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-312** Power supply connections of dual DC power modules



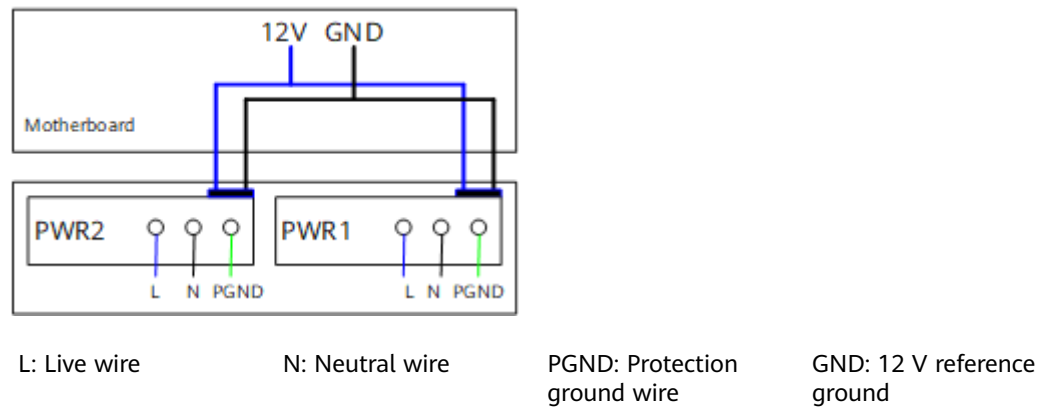
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

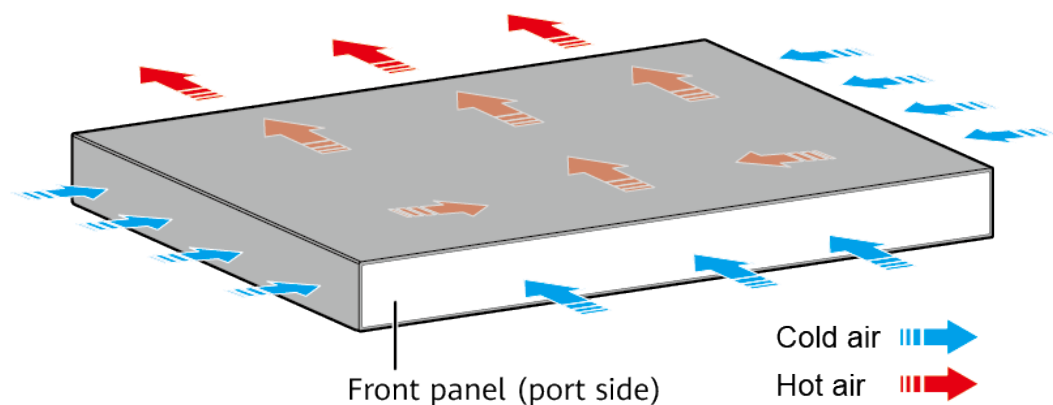
[Figure 4-313](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-313** Power supply connections of dual AC power modules



## Heat Dissipation

The S5720-36C-EI-DC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-786](#) lists technical specifications of the S5720-36C-EI-DC.

**Table 4-786** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.

Item	Description
Mean time between failures (MTBF)	80.05 years when no card is configured; 73.65 years when a 2-port 10GE SFP+ interface card is configured; 71.58 years when a 2-port 10GE RJ45 interface card is configured; 71.74 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> <li>Service ports on front panel: <math>\pm 6</math> kV in common mode</li> <li>Ports on the 2-port 10GE RJ45 rear interface card: <math>\pm 2</math> kV in common mode</li> </ul>
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	9.6 kg (21.17 lb)
Stack ports	<ul style="list-style-type: none"> <li>Ports on the 2-port 10GE SFP+ rear interface card</li> <li>Ports on the 2-port 10GE RJ45 rear interface card</li> <li>Ports on the 2-port QSFP+ rear stack card</li> </ul>
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	75.8 W



Item	Description
<p>Typical power consumption (30% of traffic load)</p> <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	<ul style="list-style-type: none"> <li>• 39.5 W (without card)</li> <li>• 47.28 W (with 2*10GE optical card)</li> <li>• 52.17 W (with 2*QSFP+ stack card)</li> <li>• 55.14 W (with 2*10GE electrical card)</li> </ul>
<p>Operating temperature</p>	<p>0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
<p>Short-term operating temperature</p>	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
<p>Storage temperature</p>	<p>-40°C to +70°C (-40°F to +158°F)</p>
<p>Noise under normal temperature (27°C, sound power)</p>	<p>&lt; 51.2 dB(A)</p>
<p>Relative humidity</p>	<p>5% to 95%, noncondensing</p>
<p>Operating altitude</p>	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350NHJ

### 4.17.3 S5720-36C-EI-28S-AC

#### Version Mapping

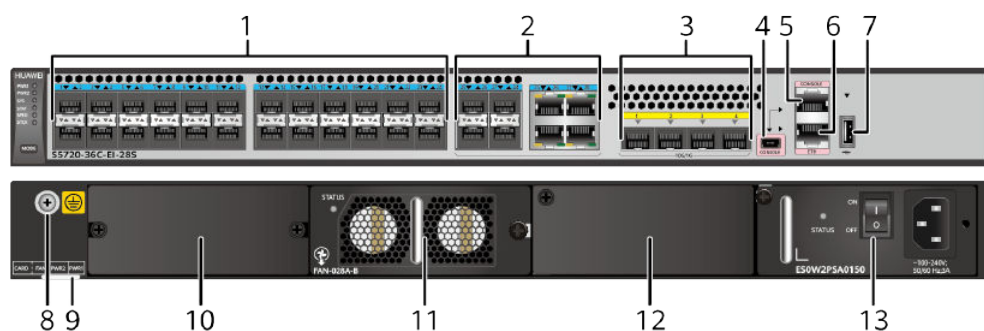
[Table 4-787](#) lists the mapping between the S5720-36C-EI-28S-AC chassis and software versions.

**Table 4-787** Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-36C-EI-28S-AC	V200R007C00 to V200R019C10 versions <b>NOTE</b> This model does not match V200R007C10.

#### Appearance and Structure

**Figure 4-314** S5720-36C-EI-28S-AC appearance



1	Twenty-four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> </ul>
3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>	4	One mini USB port
5	One console port <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One ETH management port
7	One USB port	8	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .

9	<p>ESN label</p> <p><b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.</p>	1 0	<p>Rear card slot</p> <p><b>NOTE</b> Card supported:</p> <ul style="list-style-type: none"> <li>• <a href="#">8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series)</a></li> <li>• <a href="#">8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series)</a></li> <li>• <a href="#">8.29 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)</a></li> </ul>
1 1	<p>Fan slot</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.2 FAN-028A-B Fan Module</a></p>	1 2	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>
1 3	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	-	-

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-788](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-788** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The

electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-789](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-789** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-790](#).

**Table 4-790** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-791](#) describes the attributes of an ETH management port.

**Table 4-791** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

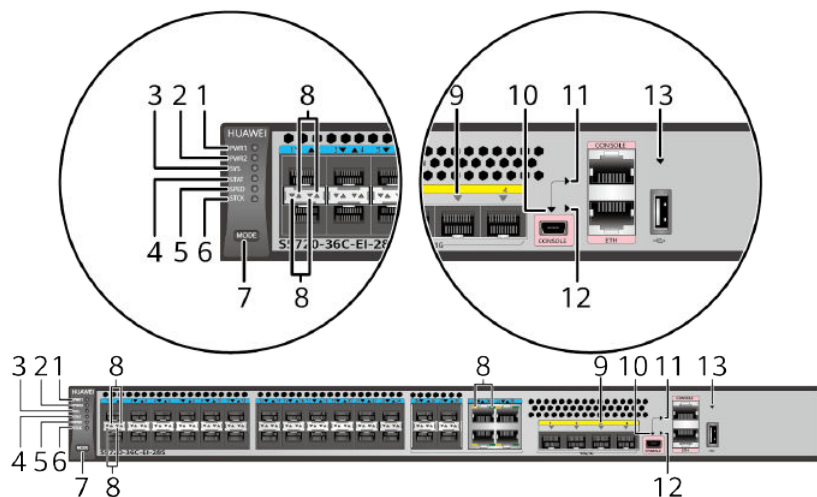
## Indicator Description

#### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-315** Indicators on the S5720-36C-EI-28S-AC



#### NOTE

The S5720-EI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5720-EI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

**Table 4-792** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.



No.	Indicator	Name	Color	Status	Description
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator (two indicators for each port)	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-793</a> .		
9	-	Service port indicator (one indicator for each port)	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-794</a> .		
10	-	Mini USB indicator	-	Off	The Mini USB port is disabled, and the console port is enabled.
			Green	Steady on	The Mini USB port is enabled. When the Mini USB indicator is steady green, the console indicator is off.
11	-	Console indicator	-	Off	The console port is disabled, and the Mini USB port is enabled.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The console port is enabled (default state). When the console indicator is steady green, the Mini USB indicator is off.
12	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
13	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-793** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

**Table 4-794** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.

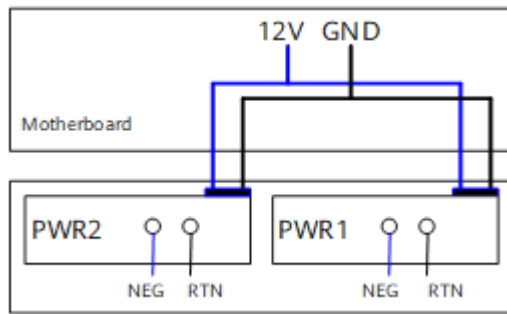
Display Mode	Color	Status	Description
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5720-36C-EI-28S-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

**Figure 4-316** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-316** Power supply connections of dual DC power modules



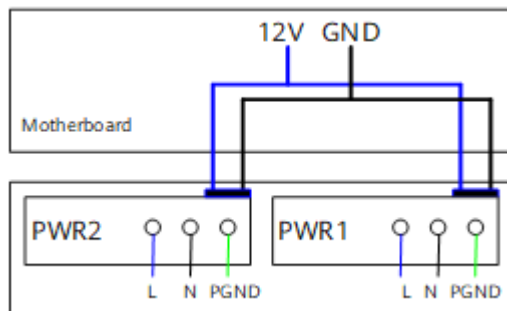
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

**Figure 4-317** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-317** Power supply connections of dual AC power modules



L: Live wire

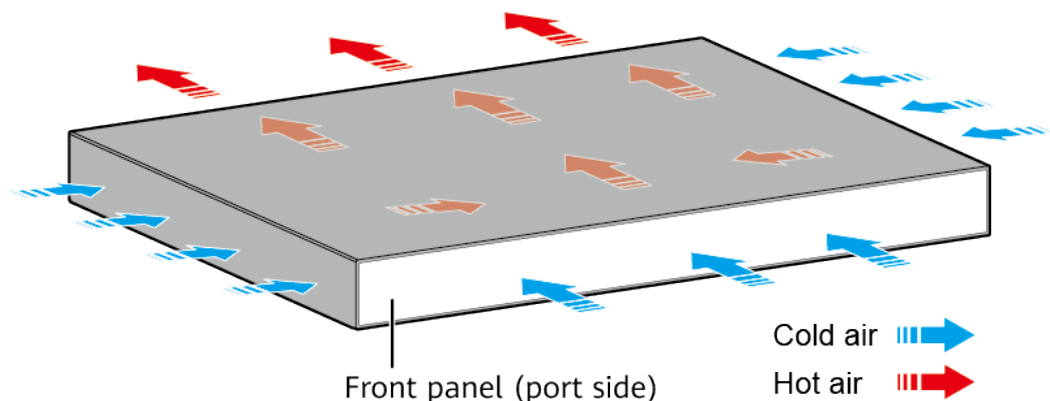
N: Neutral wire


PGND: Protection ground wire

GND: 12 V reference ground

## Heat Dissipation

The S5720-36C-EI-28S-AC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



Cold air   
 Hot air 

 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-795** lists technical specifications of the S5720-36C-EI-28S-AC.

**Table 4-795** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	85.45 years when no card is configured; 78.2 years when a 2-port 10GE SFP+ interface card is configured; 75.87 years when a 2-port 10GE RJ45 interface card is configured; 76.05 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> <li>Service ports on front panel: <math>\pm 6</math> kV in common mode</li> <li>Ports on the 2-port 10GE RJ45 rear interface card: <math>\pm 2</math> kV in common mode</li> </ul>
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	9.9 kg (21.83 lb)
Stack ports	<ul style="list-style-type: none"> <li>Ports on the 2-port 10GE SFP+ rear interface card</li> <li>Ports on the 2-port 10GE RJ45 rear interface card</li> <li>Ports on the 2-port QSFP+ rear stack card</li> </ul>
RTC	Supported
RPS	Not supported

Item	Description
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	83.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"><li>• Tested according to ATIS standard</li><li>• EEE enabled</li><li>• No PoE power consumption</li></ul>	<ul style="list-style-type: none"><li>• 47.86 W (without card)</li><li>• 55.35 W (with 2*10GE optical card)</li><li>• 60.25 W (with 2*QSFP+ stack card)</li><li>• 63.5 W (with 2*10GE electrical card)</li></ul>
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).



Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02359503

## 4.17.4 S5720-36C-EI-28S-DC

### Version Mapping

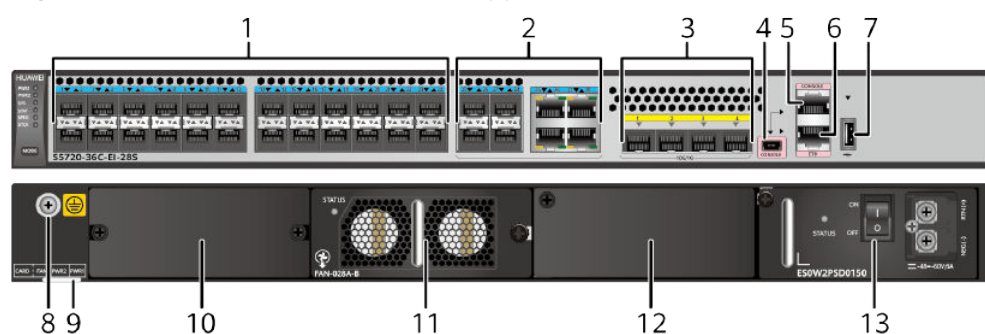
[Table 4-796](#) lists the mapping between the S5720-36C-EI-28S-DC chassis and software versions.

**Table 4-796** Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-36C-EI-28S-DC	V200R009C00 to V200R019C10 versions

## Appearance and Structure

**Figure 4-318** S5720-36C-EI-28S-DC appearance



1	<p>Twenty-four 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>	2	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> </ul>
---	--	---	--

3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>	4	<p>One mini USB port</p>
5	<p>One console port</p> <p><b>NOTE</b></p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	<p>One ETH management port</p>
7	<p>One USB port</p>	8	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>
9	<p>ESN label</p> <p><b>NOTE</b></p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>	10	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Card supported:</p> <ul style="list-style-type: none"> <li>• <b>8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series)</b></li> <li>• <b>8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series)</b></li> <li>• <b>8.29 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)</b></li> </ul>

1 1	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">7.2 FAN-028A-B Fan Module</a>	1 2	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>
1 3	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	-	-

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-797](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-797** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

**10GE SFP+ port**

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-798](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-798** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

**Console port**

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-799](#).

**Table 4-799** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 4-800** describes the attributes of an ETH management port.

**Table 4-800** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not

support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

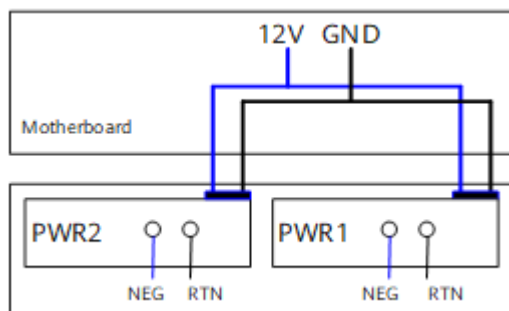
The S5720-36C-EI-28S-DC has the same types of indicators as the S5720-36C-EI-28S-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-36C-EI-28S-DC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 4-319](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-319** Power supply connections of dual DC power modules



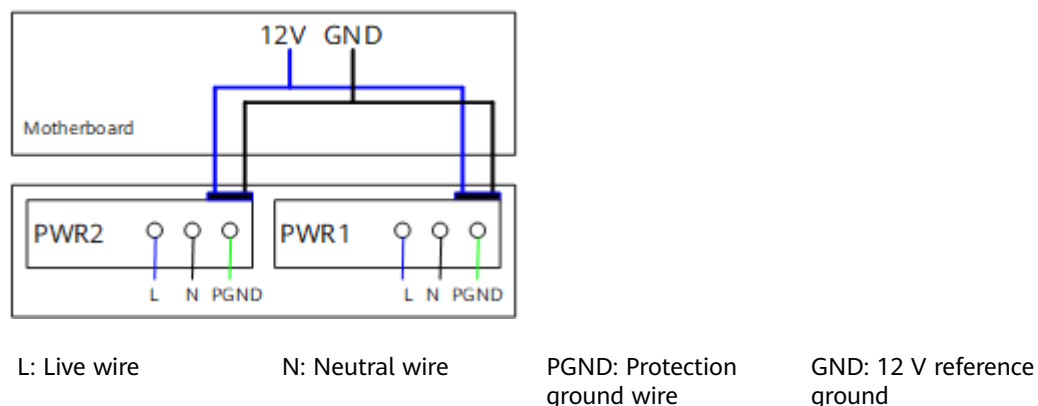
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

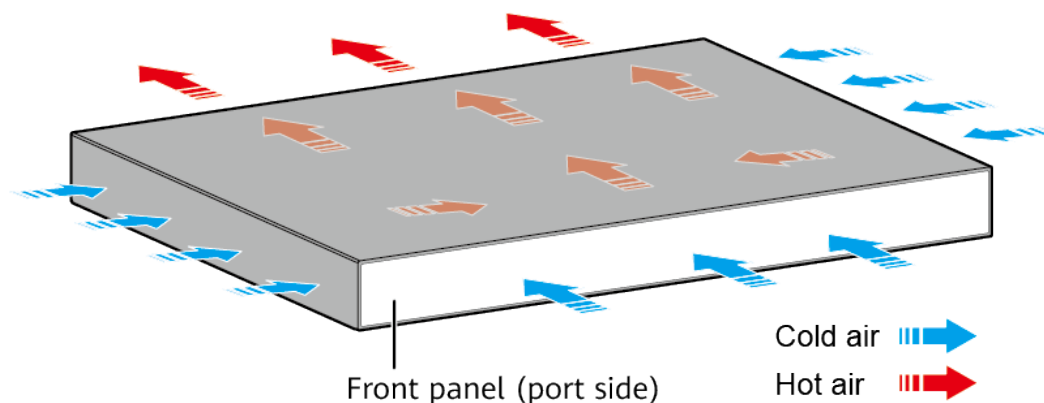
[Figure 4-320](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-320** Power supply connections of dual AC power modules



## Heat Dissipation

The S5720-36C-EI-28S-DC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-801** lists technical specifications of the S5720-36C-EI-28S-DC.

**Table 4-801** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.



Item	Description
Mean time between failures (MTBF)	85.45 years when no card is configured; 78.2 years when a 2-port 10GE SFP+ interface card is configured; 75.87 years when a 2-port 10GE RJ45 interface card is configured; 76.05 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> <li>Service ports on front panel: <math>\pm 6</math> kV in common mode</li> <li>Ports on the 2-port 10GE RJ45 rear interface card: <math>\pm 2</math> kV in common mode</li> </ul>
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	9.7 kg (21.39 lb)
Stack ports	<ul style="list-style-type: none"> <li>Ports on the 2-port 10GE SFP+ rear interface card</li> <li>Ports on the 2-port 10GE RJ45 rear interface card</li> <li>Ports on the 2-port QSFP+ rear stack card</li> </ul>
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	83.9 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	<ul style="list-style-type: none"> <li>• 47.86 W (without card)</li> <li>• 55.35 W (with 2*10GE optical card)</li> <li>• 60.25 W (with 2*QSFP+ stack card)</li> <li>• 63.5 W (with 2*10GE electrical card)</li> </ul>
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350NHN

## 4.17.5 S5720-36C-PWR-EI-AC

### Version Mapping

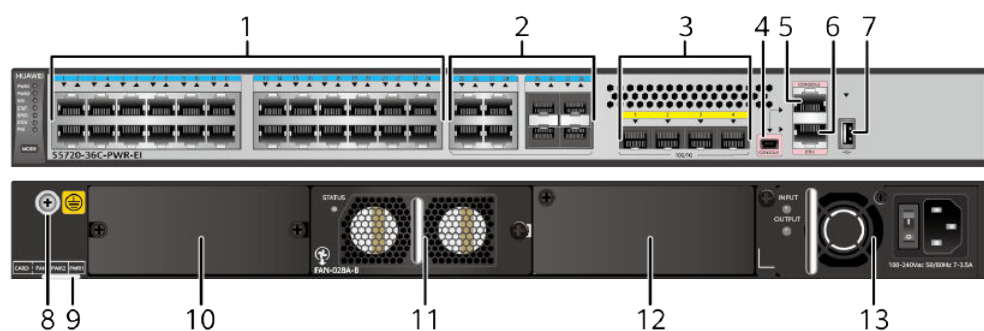
[Table 4-802](#) lists the mapping between the S5720-36C-PWR-EI-AC chassis and software versions.

**Table 4-802** Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-36C-PWR-EI-AC	V200R007C00 to V200R019C10 versions <b>NOTE</b> This model does not match V200R007C10.

### Appearance and Structure

**Figure 4-321** S5720-36C-PWR-EI-AC appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>
3	Four 10GE SFP+ ports  Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>	4	One mini USB port
5	One console port  <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One ETH management port
7	One USB port	8	Ground screw  <b>NOTE</b> It is used with a <b>ground cable</b> .

9	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.	1 0	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series)</li> <li>8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series)</li> <li>8.29 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)</li> </ul>
1 1	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">7.2 FAN-028A-B Fan Module</a>	1 2	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>500 W AC PoE power module</li> <li>650 W DC PoE power module</li> </ul>
1 3	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>500 W AC PoE power module</li> <li>650 W DC PoE power module</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-803](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-803** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-804](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-804** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-805](#).

**Table 4-805** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-806](#) describes the attributes of an ETH management port.

**Table 4-806** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

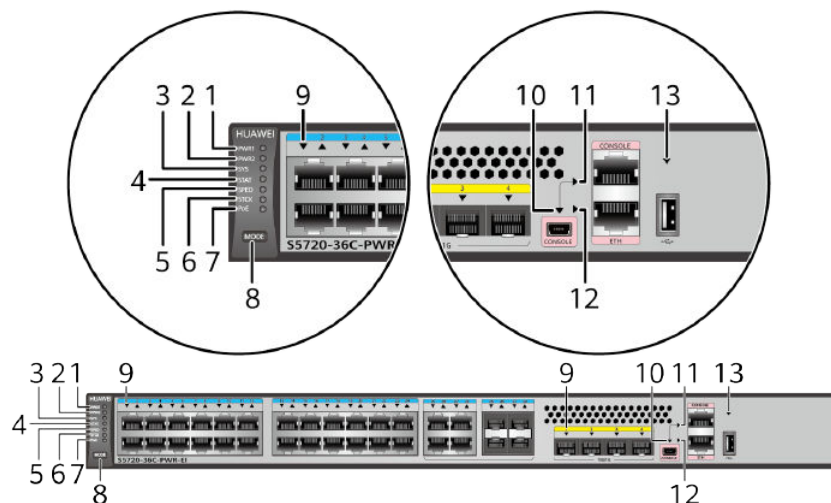
## Indicator Description

#### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-322 Indicators on the S5720-36C-PWR-EI-AC



#### NOTE

The S5720-EI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5720-EI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.



**Table 4-807** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-808</a> .		
10	-	Mini USB indicator	-	Off	The Mini USB port is disabled, and the console port is enabled.
			Green	Steady on	The Mini USB port is enabled. When the Mini USB indicator is steady green, the console indicator is off.
11	-	Console indicator	-	Off	The console port is disabled, and the Mini USB port is enabled.
			Green	Steady on	The console port is enabled (default state). When the console indicator is steady green, the Mini USB indicator is off.

No.	Indicator	Name	Color	Status	Description
12	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
13	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-808** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> <li>• The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.</li> <li>• The total power consumption of PDs has reached the maximum power of the switch.</li> <li>• The manual power management mode is used and the port is not enabled to provide power to the PD.</li> </ul>
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>

Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>• If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5720-36C-PWR-EI-AC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. [Table 4-809](#) lists its power supply configurations.

**Table 4-809** Power supply configurations

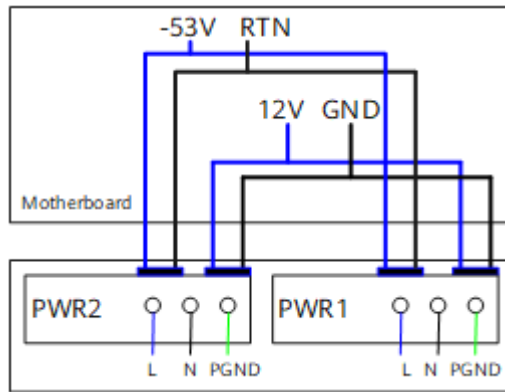
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 12</li> </ul>
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 28</li> <li>• 802.3at (30 W per port): 24</li> </ul>

### NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 4-323](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

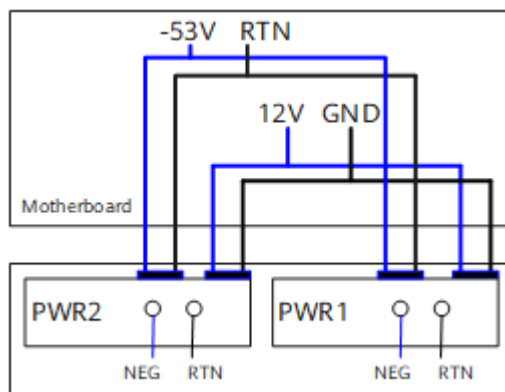
**Figure 4-323** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

**Figure 4-324** shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

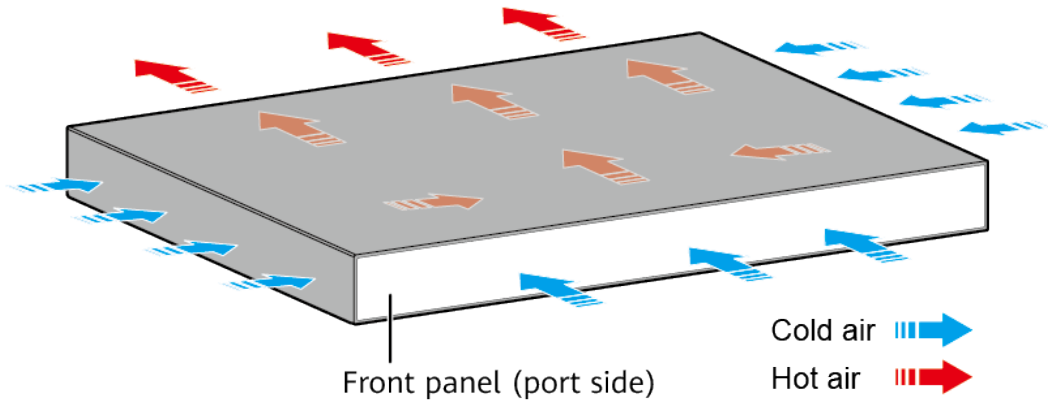
**Figure 4-324** Power supply connections of dual DC PoE power modules



NEG: negative wire      RTN: positive wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5720-36C-PWR-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-810** lists technical specifications of the S5720-36C-PWR-EI-AC.

**Table 4-810** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	60.72 years when no card is configured; 56.97 years when a 2-port 10GE SFP+ interface card is configured; 55.72 years when a 2-port 10GE RJ45 interface card is configured; 55.82 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> <li>Service ports on front panel: <math>\pm 6</math> kV in common mode</li> <li>Ports on the 2-port 10GE RJ45 rear interface card: <math>\pm 2</math> kV in common mode</li> </ul>
Power supply surge protection	<ul style="list-style-type: none"> <li>Using 500 W AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using 650 W DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>



Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	9.9 kg (21.83 lb)
Stack ports	<ul style="list-style-type: none"> <li>Ports on the 2-port 10GE SFP+ rear interface card</li> <li>Ports on the 2-port 10GE RJ45 rear interface card</li> <li>Ports on the 2-port QSFP+ rear stack card</li> </ul>
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 78 W</li> <li>100% PoE loads: 864.3 W (system power consumption: 124.3 W, PoE: 740 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	<ul style="list-style-type: none"> <li>48.45 W (without card)</li> <li>56.14 W (with 2*10GE optical card)</li> <li>60.76 W (with 2*QSFP+ stack card)</li> <li>64.8 W (with 2*10GE electrical card)</li> </ul>
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)  <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02359573

## 4.17.6 S5720-36C-PWR-EI-DC

### Version Mapping

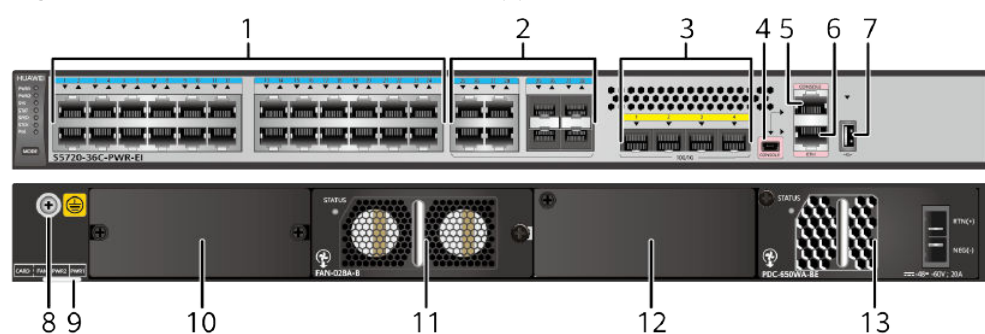
**Table 4-811** lists the mapping between the S5720-36C-PWR-EI-DC chassis and software versions.

**Table 4-811** Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-36C-PWR-EI-DC	V200R009C00 to V200R019C10 versions

## Appearance and Structure

**Figure 4-325** S5720-36C-PWR-EI-DC appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>● <b>FE optical module</b></li> <li>● <b>GE optical module</b></li> <li>● <b>GE-CWDM optical module</b></li> <li>● <b>GE-DWDM optical module</b></li> </ul>
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>	4	<p>One mini USB port</p>
5	<p>One console port</p> <p><b>NOTE</b>                  It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	<p>One ETH management port</p>
7	<p>One USB port</p>	8	<p>Ground screw</p> <p><b>NOTE</b>                  It is used with a <b>ground cable</b>.</p>
9	<p>ESN label</p> <p><b>NOTE</b>                  You can draw it out to view the ESN and MAC address of the switch.</p>	10	<p>Rear card slot</p> <p><b>NOTE</b>                  Card supported:</p> <ul style="list-style-type: none"> <li>• <b>8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series)</b></li> <li>• <b>8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series)</b></li> <li>• <b>8.29 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)</b></li> </ul>

1 1	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">7.2 FAN-028A-B Fan Module</a>	1 2	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> </ul>
1 3	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-812](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-812** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

 NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-813](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-813** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-814](#).

**Table 4-814** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 4-815** describes the attributes of an ETH management port.

**Table 4-815** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not

support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-36C-PWR-EI-DC has the same types of indicators as the S5720-36C-PWR-EI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-36C-PWR-EI-DC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. [Table 4-816](#) lists its power supply configurations.

**Table 4-816** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 28</li> <li>802.3at (30 W per port): 24</li> </ul>

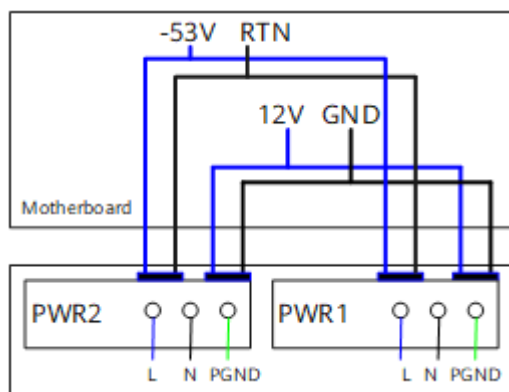
 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 4-326](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.



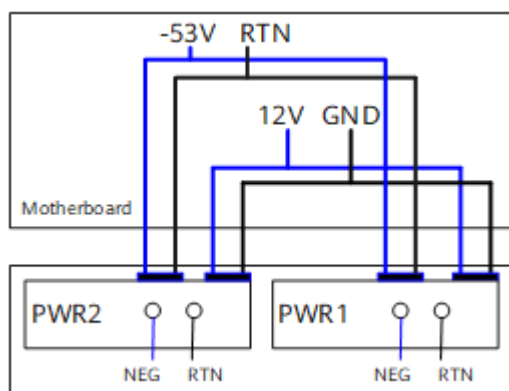
**Figure 4-326** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

**Figure 4-327** shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

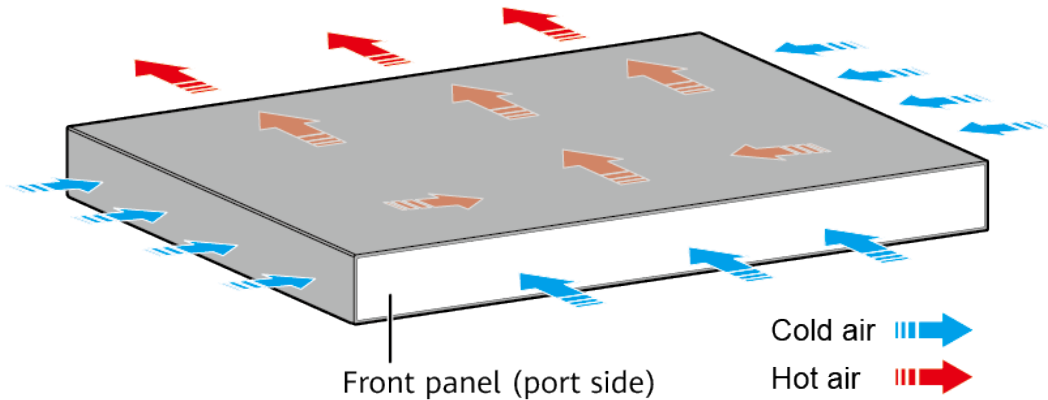
**Figure 4-327** Power supply connections of dual DC PoE power modules



NEG: negative wire      RTN: positive wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5720-36C-PWR-EI-DC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-817** lists technical specifications of the S5720-36C-PWR-EI-DC.

**Table 4-817** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	60.72 years when no card is configured; 56.97 years when a 2-port 10GE SFP+ interface card is configured; 55.72 years when a 2-port 10GE RJ45 interface card is configured; 55.82 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> <li>Service ports on front panel: <math>\pm 6</math> kV in common mode</li> <li>Ports on the 2-port 10GE RJ45 rear interface card: <math>\pm 2</math> kV in common mode</li> </ul>
Power supply surge protection	<ul style="list-style-type: none"> <li>Using 500 W AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using 650 W DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	9.9 kg (21.83 lb)
Stack ports	<ul style="list-style-type: none"> <li>Ports on the 2-port 10GE SFP+ rear interface card</li> <li>Ports on the 2-port 10GE RJ45 rear interface card</li> <li>Ports on the 2-port QSFP+ rear stack card</li> </ul>
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 78 W</li> <li>100% PoE loads: 864.3 W (system power consumption: 124.3 W, PoE: 740 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	<ul style="list-style-type: none"> <li>48.45 W (without card)</li> <li>56.14 W (with 2*10GE optical card)</li> <li>60.76 W (with 2*QSFP+ stack card)</li> <li>64.8 W (with 2*10GE electrical card)</li> </ul>
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350NHL

## 4.17.7 S5720-56C-EI-AC

### Version Mapping

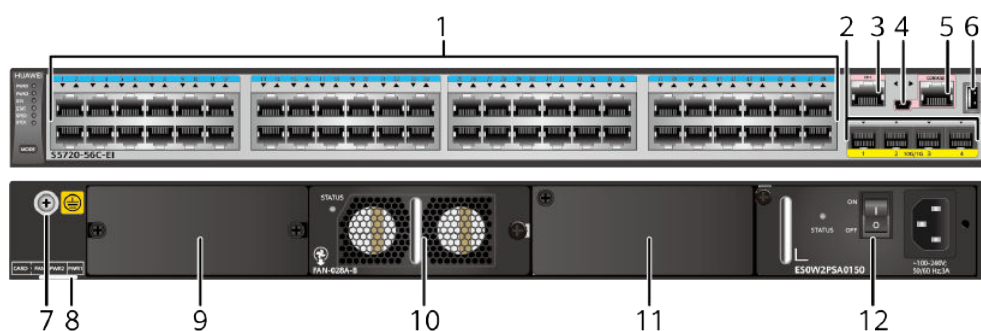
**Table 4-818** lists the mapping between the S5720-56C-EI-AC chassis and software versions.

**Table 4-818** Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-56C-EI-AC	V200R007C00 to V200R019C10 versions <b>NOTE</b> This model does not match V200R007C10.

## Appearance and Structure

**Figure 4-328** S5720-56C-EI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>
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3	One ETH management port	4	One mini USB port
5	One console port <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <a href="#">8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series)</a></li> <li>• <a href="#">8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series)</a></li> <li>• <a href="#">8.29 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)</a></li> </ul>	10	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">7.2 FAN-028A-B Fan Module</a>
11	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	12	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-819](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-819** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

Attribute	Description
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-820](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-820** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-821](#).

**Table 4-821** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-822](#) describes the attributes of an ETH management port.

**Table 4-822** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.



## Indicator Description

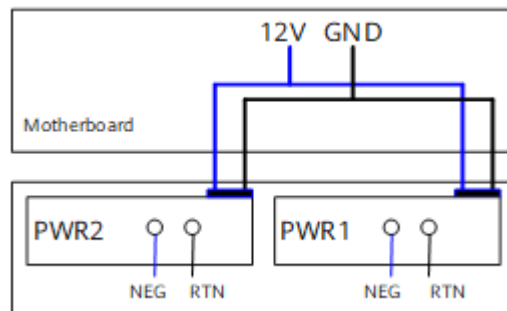
The S5720-56C-EI-AC has similar indicators to those on the S5720-36C-PWR-EI-AC, except that the S5720-56C-EI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-56C-EI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 4-329](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-329** Power supply connections of dual DC power modules



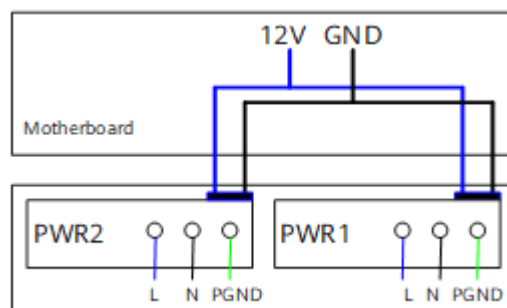
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

[Figure 4-330](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-330** Power supply connections of dual AC power modules



L: Live wire

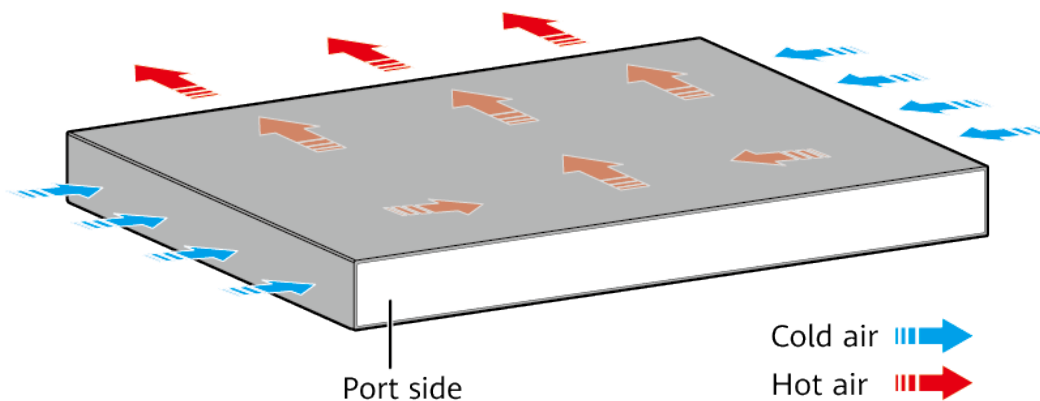
N: Neutral wire

PGND: Protection  
ground wire

GND: 12 V reference  
ground

## Heat Dissipation

The S5720-56C-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-823](#) lists technical specifications of the S5720-56C-EI-AC.

**Table 4-823** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	71.18 years when no card is configured; 66.07 years when a 2-port 10GE SFP+ interface card is configured; 66.40 years when a 2-port 10GE RJ45 interface card is configured; 64.53 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> <li>Service ports on front panel: <math>\pm 6</math> kV in common mode</li> <li>Ports on the 2-port 10GE RJ45 rear interface card: <math>\pm 2</math> kV in common mode</li> </ul>
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>● Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>● Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	10 kg (22.05 lb)
Stack ports	<ul style="list-style-type: none"> <li>● Ports on the 2-port 10GE SFP+ rear interface card</li> <li>● Ports on the 2-port 10GE RJ45 rear interface card</li> <li>● Ports on the 2-port QSFP+ rear stack card</li> </ul>
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	86.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>● Tested according to ATIS standard</li> <li>● EEE enabled</li> <li>● No PoE power consumption</li> </ul>	<ul style="list-style-type: none"> <li>● 40.45 W (without card)</li> <li>● 47.78 W (with 2*10GE optical card)</li> <li>● 52.87 W (with 2*QSFP+ stack card)</li> <li>● 55.85 W (with 2*10GE electrical card)</li> </ul>
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)  <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02359504

## 4.17.8 S5720-56C-EI-DC

### Version Mapping

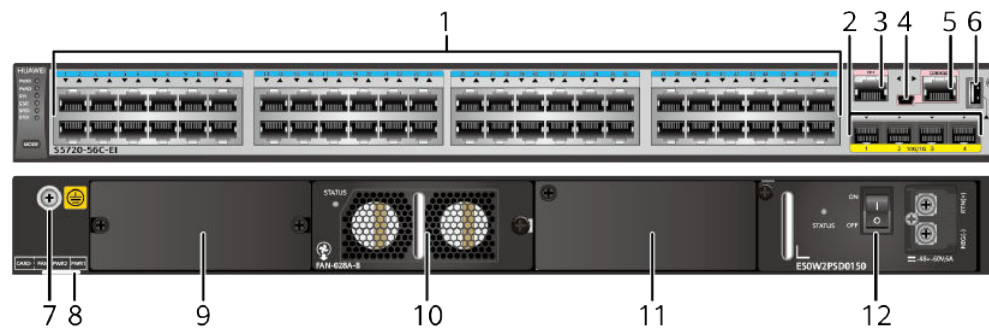
[Table 4-824](#) lists the mapping between the S5720-56C-EI-DC chassis and software versions.

**Table 4-824** Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-56C-EI-DC	V200R009C00 to V200R019C10 versions

## Appearance and Structure

**Figure 4-331** S5720-56C-EI-DC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>
3	One ETH management port	4	One mini USB port

5	One console port <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <a href="#">8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series)</a></li> <li>• <a href="#">8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series)</a></li> <li>• <a href="#">8.29 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)</a></li> </ul>	10	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">7.2 FAN-028A-B Fan Module</a>
11	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	12	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-825](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-825** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-826](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-826** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-827](#).

**Table 4-827** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 4-828** describes the attributes of an ETH management port.

**Table 4-828** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-56C-EI-DC has similar indicators to those on the S5720-36C-PWR-EI-AC, except that the S5720-56C-EI-DC does not have a PoE mode indicator. For details, see **Indicator Description**.

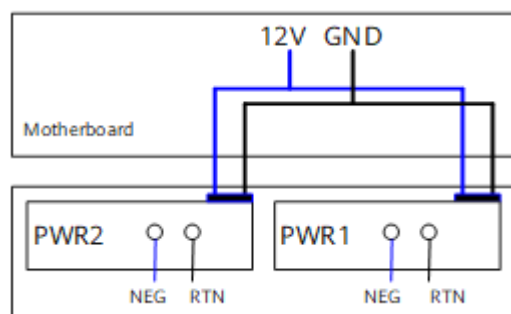


## Power Supply Configuration

The S5720-56C-EI-DC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

**Figure 4-332** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-332** Power supply connections of dual DC power modules



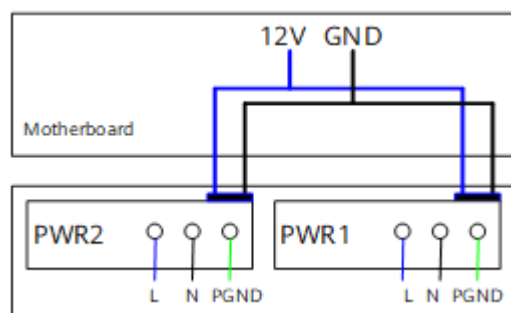
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

**Figure 4-333** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-333** Power supply connections of dual AC power modules



L: Live wire

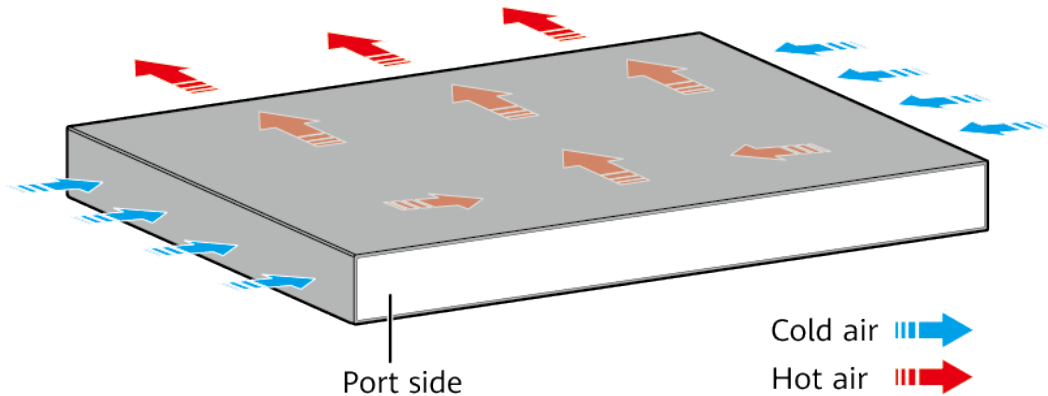
N: Neutral wire

PGND: Protection  
ground wire

GND: 12 V reference  
ground

## Heat Dissipation

The S5720-56C-EI-DC has pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-829** lists technical specifications of the S5720-56C-EI-DC.

**Table 4-829** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	71.18 years when no card is configured; 66.07 years when a 2-port 10GE SFP+ interface card is configured; 66.40 years when a 2-port 10GE RJ45 interface card is configured; 64.53 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> <li>Service ports on front panel: <math>\pm 6</math> kV in common mode</li> <li>Ports on the 2-port 10GE RJ45 rear interface card: <math>\pm 2</math> kV in common mode</li> </ul>
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>● Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>● Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	9.8 kg (21.61 lb)
Stack ports	<ul style="list-style-type: none"> <li>● Ports on the 2-port 10GE SFP+ rear interface card</li> <li>● Ports on the 2-port 10GE RJ45 rear interface card</li> <li>● Ports on the 2-port QSFP+ rear stack card</li> </ul>
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	86.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>● Tested according to ATIS standard</li> <li>● EEE enabled</li> <li>● No PoE power consumption</li> </ul>	<ul style="list-style-type: none"> <li>● 40.45 W (without card)</li> <li>● 47.78 W (with 2*10GE optical card)</li> <li>● 52.87 W (with 2*QSFP+ stack card)</li> <li>● 55.85 W (with 2*10GE electrical card)</li> </ul>
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)  <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350NHK

## 4.17.9 S5720-56C-EI-48S-AC

### Version Mapping

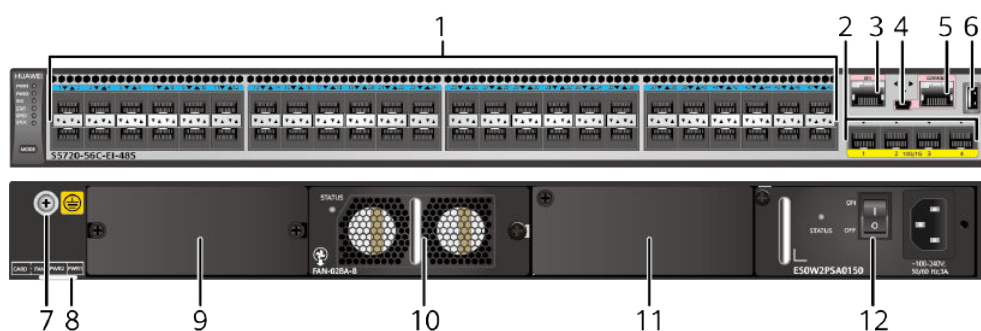
[Table 4-830](#) lists the mapping between the S5720-56C-EI-48S-AC chassis and software versions.

**Table 4-830** Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-56C-EI-48S-AC	V200R007C00 to V200R019C10 versions <b>NOTE</b> This model does not match V200R007C10.

## Appearance and Structure

**Figure 4-334** S5720-56C-EI-48S-AC appearance



1	<p>Forty-eight 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>
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3	One ETH management port	4	One mini USB port
5	One console port <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <a href="#">8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series)</a></li> <li>• <a href="#">8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series)</a></li> <li>• <a href="#">8.29 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)</a></li> </ul>	10	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">7.2 FAN-028A-B Fan Module</a>
11	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	12	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-831](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-831** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-832](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-832** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-833](#).

**Table 4-833** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-834](#) describes the attributes of an ETH management port.

**Table 4-834** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-56C-EI-48S-AC has the same types of indicators as the S5720-36C-EI-28S-AC. For details, see [Indicator Description](#).

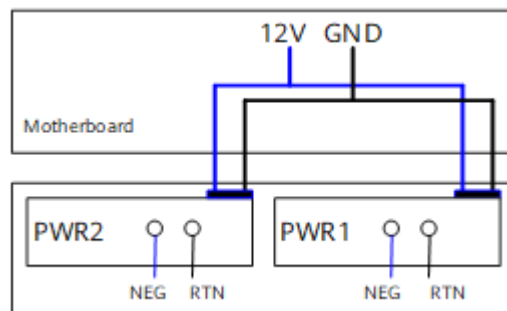


## Power Supply Configuration

The S5720-56C-EI-48S-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

**Figure 4-335** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-335** Power supply connections of dual DC power modules



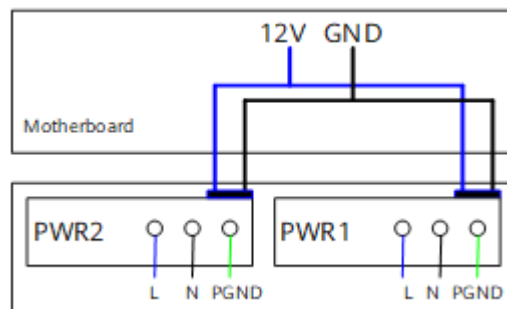
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

**Figure 4-336** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-336** Power supply connections of dual AC power modules



L: Live wire

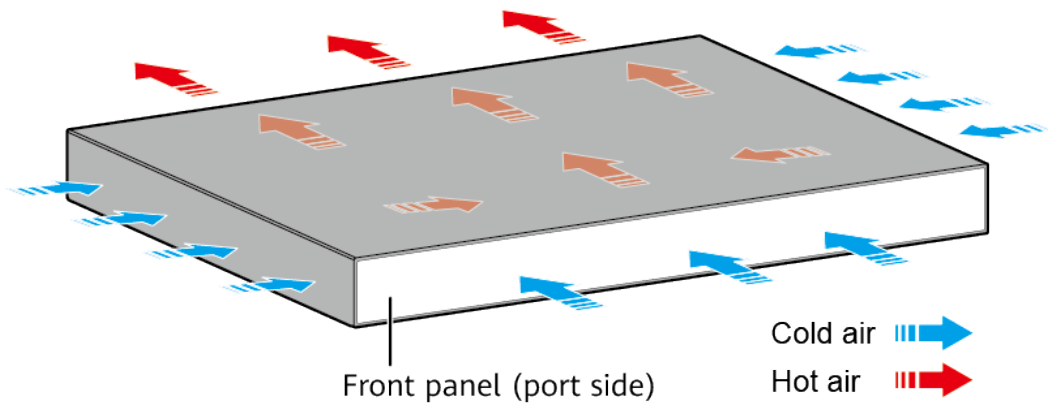
N: Neutral wire

PGND: Protection  
ground wire

GND: 12 V reference  
ground

## Heat Dissipation

The S5720-56C-EI-48S-AC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-835** lists technical specifications of the S5720-56C-EI-48S-AC.

**Table 4-835** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	73.91 years when no card is configured; 68.42 years when a 2-port 10GE SFP+ interface card is configured; 66.63 years when a 2-port 10GE RJ45 interface card is configured; 66.77 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Ports on the 2-port 10GE RJ45 rear interface card: $\pm 2$ kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>

Item	Description
Weight (with packaging)	10.1 kg (22.27 lb)
Stack ports	<ul style="list-style-type: none"> <li>Ports on the 2-port 10GE SFP+ rear interface card</li> <li>Ports on the 2-port 10GE RJ45 rear interface card</li> <li>Ports on the 2-port QSFP+ rear stack card</li> </ul>
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	104 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	<ul style="list-style-type: none"> <li>68.82 W (without card)</li> <li>76.55 W (with 2*10GE optical card)</li> <li>81.23 W (with 2*QSFP+ stack card)</li> <li>83.78 W (with 2*10GE electrical card)</li> </ul>
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02359558

## 4.17.10 S5720-56C-EI-48S-DC

### Version Mapping

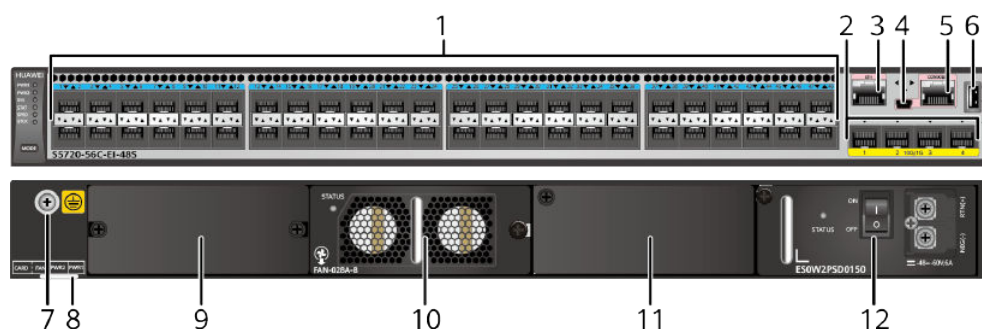
[Table 4-836](#) lists the mapping between the S5720-56C-EI-48S-DC chassis and software versions.

**Table 4-836** Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-56C-EI-48S-DC	V200R009C00 to V200R019C10 versions

## Appearance and Structure

**Figure 4-337** S5720-56C-EI-48S-DC appearance



1	<p>Forty-eight 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>
3	One ETH management port	4	One mini USB port

5	One console port <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <a href="#">8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series)</a></li> <li>• <a href="#">8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series)</a></li> <li>• <a href="#">8.29 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)</a></li> </ul>	10	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">7.2 FAN-028A-B Fan Module</a>
11	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	12	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-837](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-837** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z

Attribute	Description
Working mode	100/1000 Mbit/s auto-sensing

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-838](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-838** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-839](#).

**Table 4-839** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 4-840** describes the attributes of an ETH management port.

**Table 4-840** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-56C-EI-48S-DC has the same types of indicators as the S5720-36C-EI-28S-AC. For details, see **Indicator Description**.

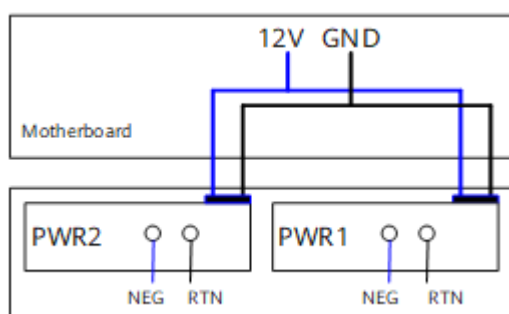


## Power Supply Configuration

The S5720-56C-EI-48S-DC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

**Figure 4-338** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-338** Power supply connections of dual DC power modules



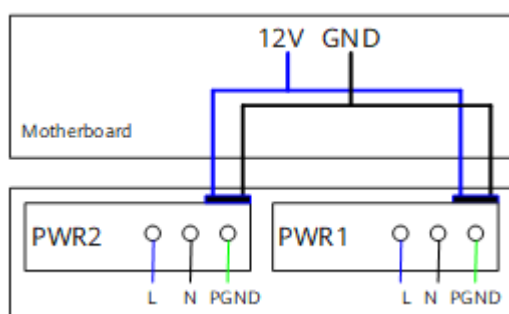
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

**Figure 4-339** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-339** Power supply connections of dual AC power modules



L: Live wire

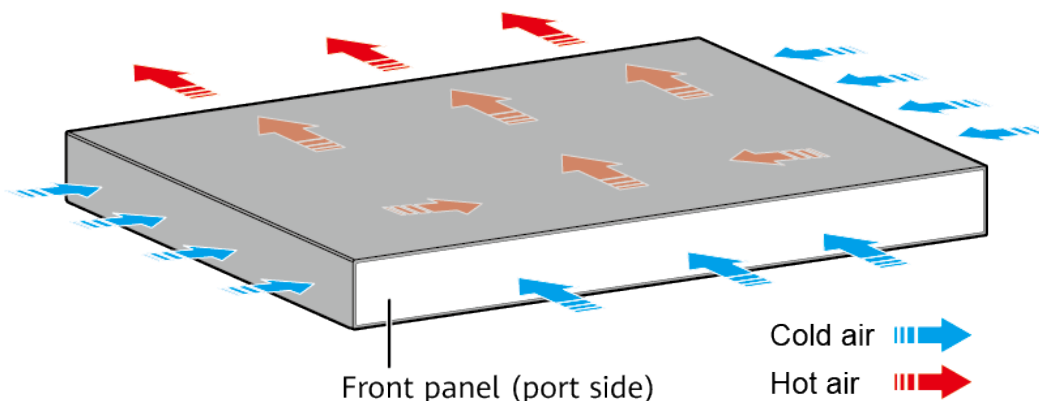
N: Neutral wire

PGND: Protection  
ground wire

GND: 12 V reference  
ground

## Heat Dissipation

The S5720-56C-EI-48S-DC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-841** lists technical specifications of the S5720-56C-EI-48S-DC.

**Table 4-841** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	73.91 years when no card is configured; 68.42 years when a 2-port 10GE SFP+ interface card is configured; 66.63 years when a 2-port 10GE RJ45 interface card is configured; 66.77 years when a stack card is configured
Mean time to repair (MTTR)	2
Availability	> 0.99999
Service port surge protection	Ports on the 2-port 10GE RJ45 rear interface card: $\pm 2$ kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>

Item	Description
Weight (with packaging)	9.9 kg (21.83 lb)
Stack ports	<ul style="list-style-type: none"> <li>Ports on the 2-port 10GE SFP+ rear interface card</li> <li>Ports on the 2-port 10GE RJ45 rear interface card</li> <li>Ports on the 2-port QSFP+ rear stack card</li> </ul>
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	104 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	<ul style="list-style-type: none"> <li>68.82 W (without card)</li> <li>76.55 W (with 2*10GE optical card)</li> <li>81.23 W (with 2*QSFP+ stack card)</li> <li>83.78 W (with 2*10GE electrical card)</li> </ul>
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350NHP

## 4.17.11 S5720-56C-PWR-EI-AC

### Version Mapping

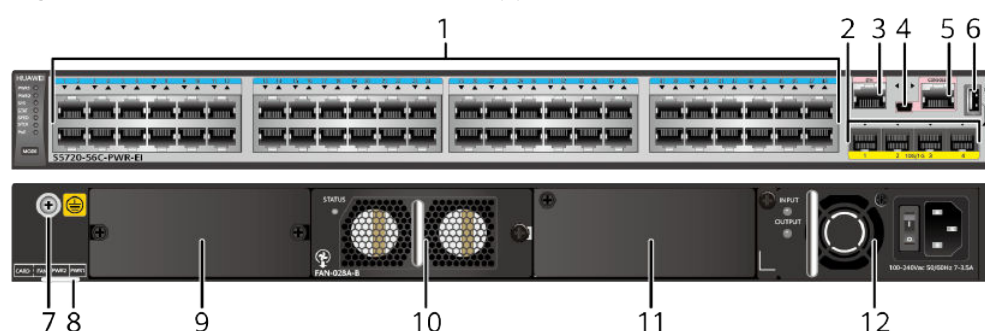
[Table 4-842](#) lists the mapping between the S5720-56C-PWR-EI-AC chassis and software versions.

**Table 4-842** Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-56C-PWR-EI-AC	V200R007C00 to V200R019C10 versions <b>NOTE</b> This model does not match V200R007C10.

## Appearance and Structure

**Figure 4-340** S5720-56C-PWR-EI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>
---	--	---	--

3	One ETH management port	4	One mini USB port
5	One console port <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <a href="#">8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series)</a></li> <li>• <a href="#">8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series)</a></li> <li>• <a href="#">8.29 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)</a></li> </ul>	10	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">7.2 FAN-028A-B Fan Module</a>
11	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> </ul>	12	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-843](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-843** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

Attribute	Description
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-844](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-844** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-845](#).

**Table 4-845** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-846](#) describes the attributes of an ETH management port.

**Table 4-846** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-56C-PWR-EI-AC has the same types of indicators as the S5720-36C-PWR-EI-AC. For details, see [Indicator Description](#).



## Power Supply Configuration

The S5720-56C-PWR-EI-AC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. [Table 4-847](#) lists its power supply configurations.

**Table 4-847** Power supply configurations

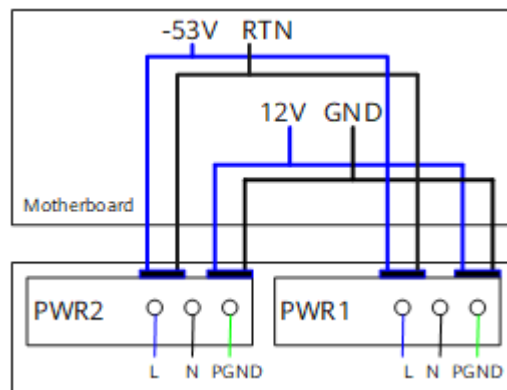
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 24</li> </ul>

### NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 4-341](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

**Figure 4-341** Power supply by dual AC PoE power modules



L: live wire

N: neutral wire

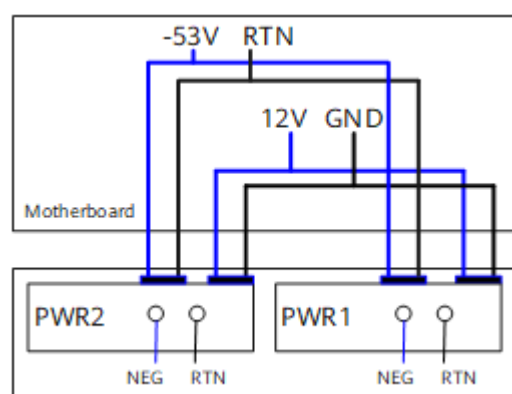
PGND: protection  
ground wire

GND: 12 V  
reference ground

RTN: -53 V  
reference ground

**Figure 4-342** shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

**Figure 4-342** Power supply connections of dual DC PoE power modules



NEG: negative wire

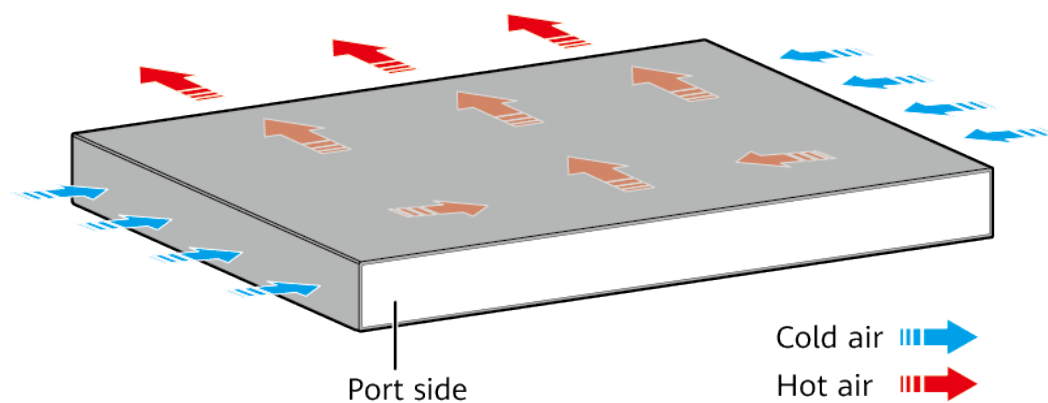
RTN: positive wire

GND: 12 V reference ground

RTN: -53 V reference ground

## Heat Dissipation

The S5720-56C-PWR-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-848** lists technical specifications of the S5720-56C-PWR-EI-AC.

**Table 4-848** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	51.34 years when no card is configured; 48.63 years when a 2-port 10GE SFP+ interface card is configured; 47.71 years when a 2-port 10GE RJ45 interface card is configured; 47.79 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> <li>Service ports on front panel: <math>\pm 6</math> kV in common mode</li> <li>Ports on the 2-port 10GE RJ45 rear interface card: <math>\pm 2</math> kV in common mode</li> </ul>
Power supply surge protection	<ul style="list-style-type: none"> <li>Using 500 W AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using 650 W DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	10.4 kg (22.93 lb)
Stack ports	<ul style="list-style-type: none"> <li>Ports on the 2-port 10GE SFP+ rear interface card</li> <li>Ports on the 2-port 10GE RJ45 rear interface card</li> <li>Ports on the 2-port QSFP+ rear stack card</li> </ul>
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>• Not providing the PoE function: 91.6 W</li> <li>• 100% PoE loads: 889.4 W (system power consumption: 149.4 W, PoE: 740 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	<ul style="list-style-type: none"> <li>• 53.5 W (without card)</li> <li>• 61.12 W (with 2*10GE optical card)</li> <li>• 65.85 W (with 2*QSFP+ stack card)</li> <li>• 69.3 W (with 2*10GE electrical card)</li> </ul>
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 53.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02359576

## 4.17.12 S5720-56C-PWR-EI-DC

### Version Mapping

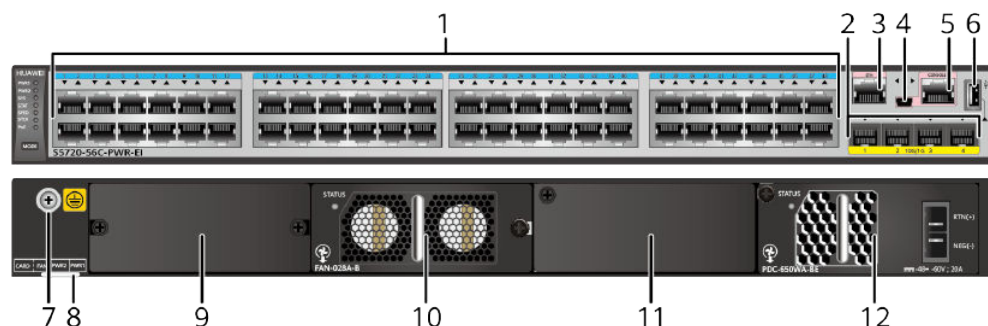
[Table 4-849](#) lists the mapping between the S5720-56C-PWR-EI-DC chassis and software versions.

**Table 4-849** Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-56C-PWR-EI-DC	V200R009C00 to V200R019C10 versions

### Appearance and Structure

**Figure 4-343** S5720-56C-PWR-EI-DC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>
3	One ETH management port	4	One mini USB port
5	<p>One console port</p> <p><b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	8	<p>ESN label</p> <p><b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.</p>

9	<p>Rear card slot</p> <p><b>NOTE</b> Card supported:</p> <ul style="list-style-type: none"> <li>• <a href="#">8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series)</a></li> <li>• <a href="#">8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series)</a></li> <li>• <a href="#">8.29 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)</a></li> </ul>	1 0	<p>Fan slot</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.2 FAN-028A-B Fan Module</a></p>
1 1	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> </ul>	1 2	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-850](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-850** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-851](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-851** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-852](#).

**Table 4-852** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-853](#) describes the attributes of an ETH management port.



**Table 4-853** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-56C-PWR-EI-DC has the same types of indicators as the S5720-36C-PWR-EI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-56C-PWR-EI-DC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. [Table 4-854](#) lists its power supply configurations.

**Table 4-854** Power supply configurations

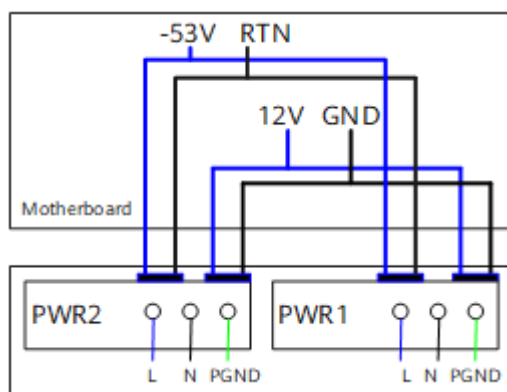
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 24</li> </ul>

**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

**Figure 4-344** shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

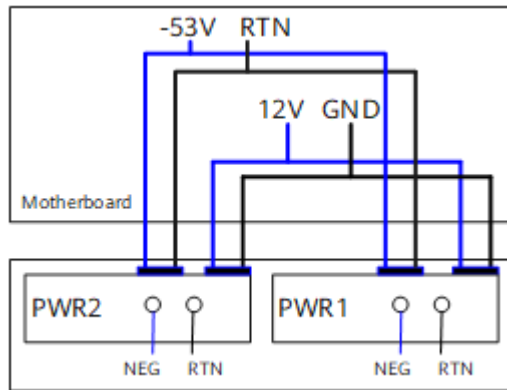
**Figure 4-344** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

**Figure 4-345** shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

**Figure 4-345** Power supply connections of dual DC PoE power modules



NEG: negative wire

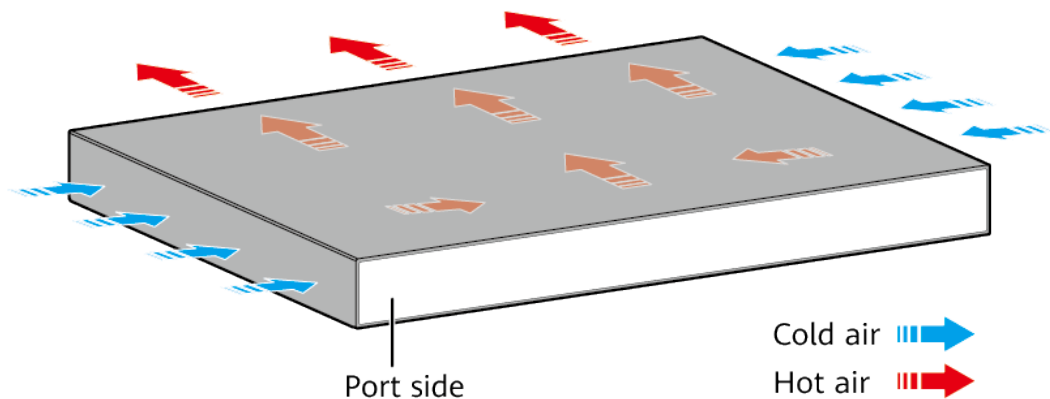
RTN: positive wire

GND: 12 V reference ground

RTN: -53 V reference ground

## Heat Dissipation

The S5720-56C-PWR-EI-DC uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-855** lists technical specifications of the S5720-56C-PWR-EI-DC.

**Table 4-855** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.

Item	Description
Mean time between failures (MTBF)	51.34 years when no card is configured; 48.63 years when a 2-port 10GE SFP+ interface card is configured; 47.71 years when a 2-port 10GE RJ45 interface card is configured; 47.79 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> <li>Service ports on front panel: <math>\pm 6</math> kV in common mode</li> <li>Ports on the 2-port 10GE RJ45 rear interface card: <math>\pm 2</math> kV in common mode</li> </ul>
Power supply surge protection	<ul style="list-style-type: none"> <li>Using 500 W AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using 650 W DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	10.3 kg (22.71 lb)
Stack ports	<ul style="list-style-type: none"> <li>Ports on the 2-port 10GE SFP+ rear interface card</li> <li>Ports on the 2-port 10GE RJ45 rear interface card</li> <li>Ports on the 2-port QSFP+ rear stack card</li> </ul>
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 98 W</li> <li>100% PoE loads: 913 W (system power consumption: 173 W, PoE: 740 W)</li> </ul>

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	<ul style="list-style-type: none"> <li>• 56.68 W (without card)</li> <li>• 63.63 W (with 2*10GE optical card)</li> <li>• 68.56 W (with 2*QSFP+ stack card)</li> <li>• 72.61 W (with 2*10GE electrical card)</li> </ul>
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350NHM

### 4.17.13 S5720-56C-PWR-EI-AC1

#### Version Mapping

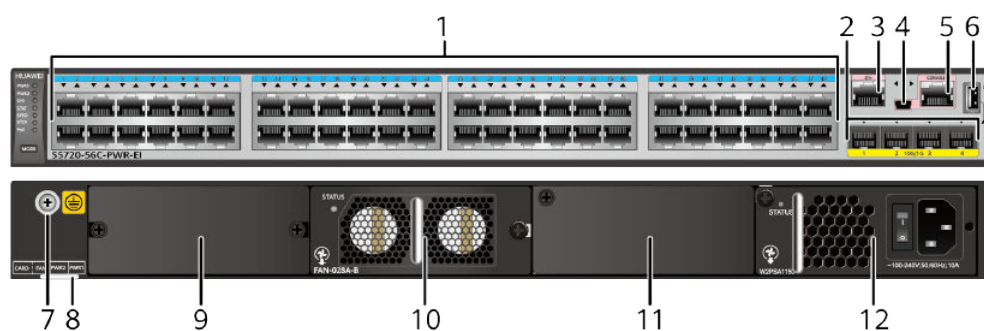
**Table 4-856** lists the mapping between the S5720-56C-PWR-EI-AC1 chassis and software versions.

**Table 4-856** Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-56C-PWR-EI-AC1	V200R007C00 to V200R019C10 versions <b>NOTE</b> This model does not match V200R007C10.

#### Appearance and Structure

**Figure 4-346** S5720-56C-PWR-EI-AC1 appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>
3	One ETH management port	4	One mini USB port
5	<p>One console port</p> <p><b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	8	<p>ESN label</p> <p><b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.</p>

9	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series)</li> <li>8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series)</li> <li>8.29 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)</li> </ul>	10	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">7.2 FAN-028A-B Fan Module</a>
11	Power module slot 2 <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>1150 W AC PoE power module</li> <li>1000 W AC PoE power module (applicable in V200R013C00 and later versions)</li> </ul>	12	Power module slot 1 <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>1150 W AC PoE power module</li> <li>1000 W AC PoE power module (applicable in V200R013C00 and later versions)</li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-857](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-857** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-858](#) describes the attributes of a 10GE SFP+ Ethernet optical port.



**Table 4-858** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-859](#).

**Table 4-859** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-860](#) describes the attributes of an ETH management port.

**Table 4-860** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-56C-PWR-EI-AC1 has the same types of indicators as the S5720-36C-PWR-EI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-56C-PWR-EI-AC1 is a PoE switch. It has two power module slots and uses 1150 W AC PoE power modules or 1000 W AC PoE power modules (applicable in V200R013C00 and later versions). A 1150 W AC PoE power module and a 1000 W AC PoE power module can be used together. [Table 4-861](#) lists its power supply configurations.

**Table 4-861** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 26</li> </ul>
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 29</li> <li>802.3at (30 W per port): 14</li> </ul>
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 29</li> </ul>
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 25</li> </ul>
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 25</li> </ul>
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>

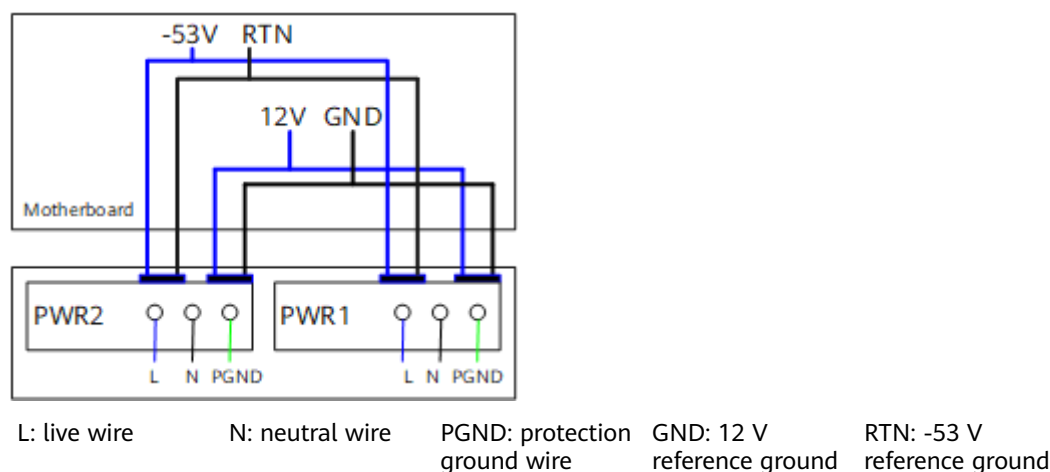
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 29</li> </ul>
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 29</li> </ul>

**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

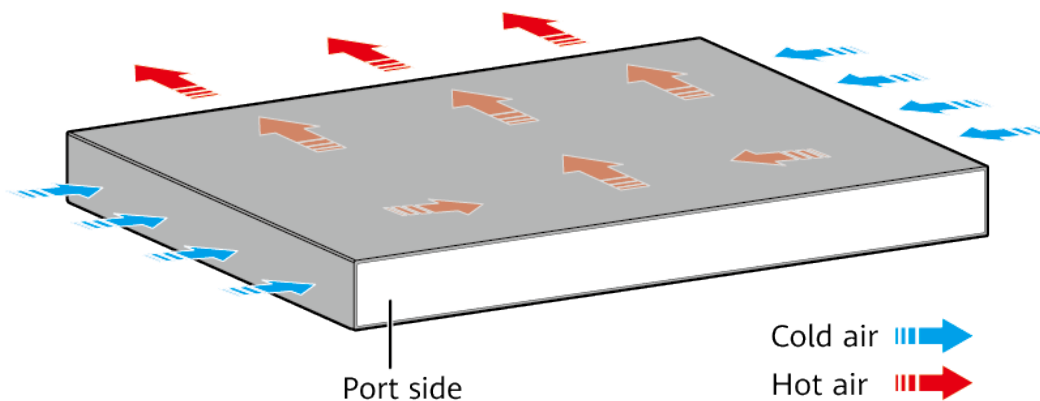
**Figure 4-347** shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

**Figure 4-347** Power supply by dual AC PoE power modules



## Heat Dissipation

The S5720-56C-PWR-EI-AC1 uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-862](#) lists technical specifications of the S5720-56C-PWR-EI-AC1.

**Table 4-862** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	51.34 years when no card is configured; 48.63 years when a 2-port 10GE SFP+ interface card is configured; 47.71 years when a 2-port 10GE RJ45 interface card is configured; 47.79 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> <li>Service ports on front panel: <math>\pm 6</math> kV in common mode</li> <li>Ports on the 2-port 10GE RJ45 rear interface card: <math>\pm 2</math> kV in common mode</li> </ul>
Power supply surge protection	<ul style="list-style-type: none"> <li>Using 1000 W AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using 1150 W AC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>● Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 510.5 mm (1.75 in. x 17.4 in. x 20.1 in.)</li> <li>● Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 541.1 mm (1.75 in. x 17.4 in. x 21.3 in.)</li> </ul>
Weight (with packaging)	10.9 kg (24.03 lb)
Stack ports	<ul style="list-style-type: none"> <li>● Ports on the 2-port 10GE SFP+ rear interface card</li> <li>● Ports on the 2-port 10GE RJ45 rear interface card</li> <li>● Ports on the 2-port QSFP+ rear stack card</li> </ul>
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>● Not providing the PoE function: 91.6 W</li> <li>● 100% PoE loads: 1564.8 W (system power consumption: 124.8 W, PoE: 1440 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>● Tested according to ATIS standard</li> <li>● EEE enabled</li> <li>● No PoE power consumption</li> </ul>	<ul style="list-style-type: none"> <li>● 53.5 W (without subcard)</li> <li>● 61.12 W (with 2*10G optical subcards)</li> <li>● 65.85 W (2*QSFP+ stack cards)</li> <li>● 69.3 W (with 2*10G electrical subcards)</li> </ul>
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)  <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 61.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02359578

## 4.17.14 S5720-36PC-EI-AC

### Version Mapping

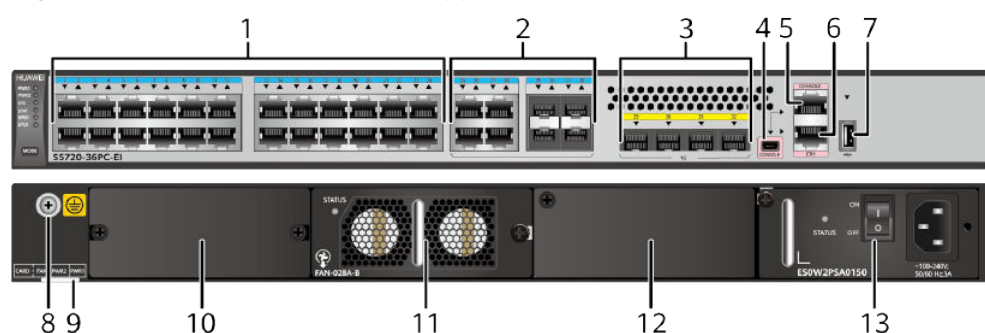
[Table 4-863](#) lists the mapping between the S5720-36PC-EI-AC chassis and software versions.

**Table 4-863** Version mapping

Series		Model	Software Version
S5720-EI	S5720-PC-EI	S5720-36PC-EI-AC	V200R007C00 to V200R019C10 versions <b>NOTE</b> This model does not match V200R007C10.

## Appearance and Structure

**Figure 4-348** S5720-36PC-EI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)  Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> </ul>
3	Four 1000BASE-X ports  Applicable modules: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> </ul>	4	One mini USB port



5	One console port <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One ETH management port
7	One USB port	8	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .
9	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.	10	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <a href="#">8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series)</a></li> <li>• <a href="#">8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series)</a></li> <li>• <a href="#">8.29 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)</a></li> </ul>
11	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">7.2 FAN-028A-B Fan Module</a>	12	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>
13	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-864](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-864** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 1000BASE-X port

A 1000BASE-X Ethernet optical port sends and receives service data at 1000 Mbit/s. [Table 4-865](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-865** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3z
Working mode	1000 Mbit/s

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-866](#).

**Table 4-866** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-867](#) describes the attributes of an ETH management port.

**Table 4-867** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

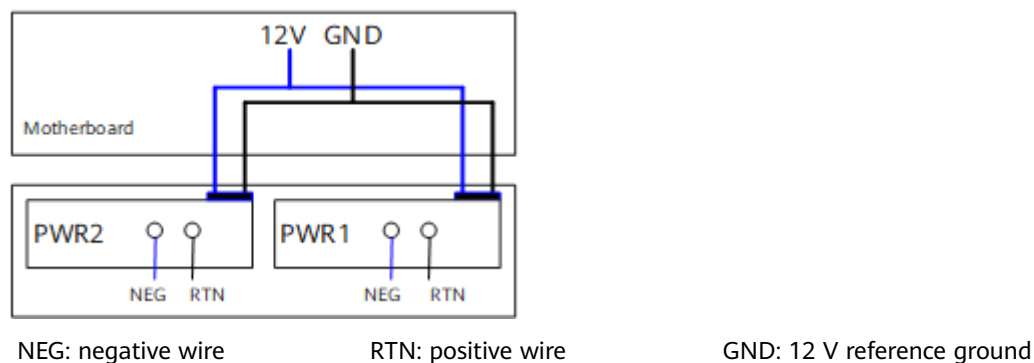
The S5720-36PC-EI-AC has similar indicators to those on the S5720-36C-PWR-EI-AC, except that the S5720-36PC-EI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-36PC-EI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

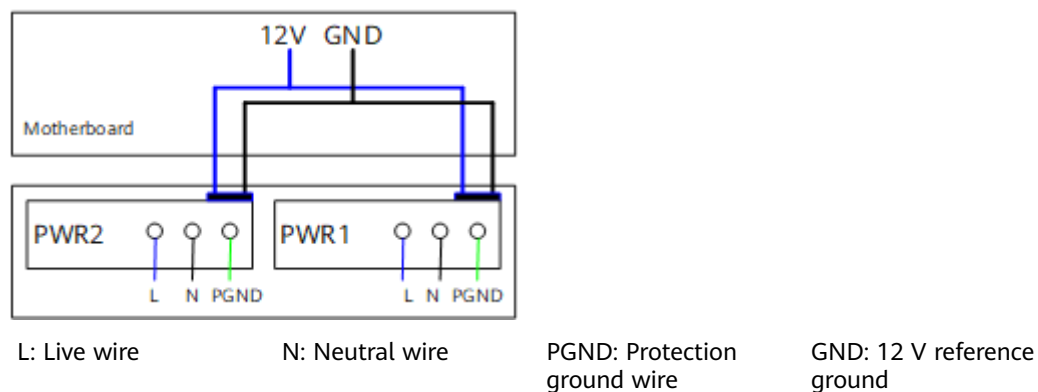
[Figure 4-349](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-349** Power supply connections of dual DC power modules



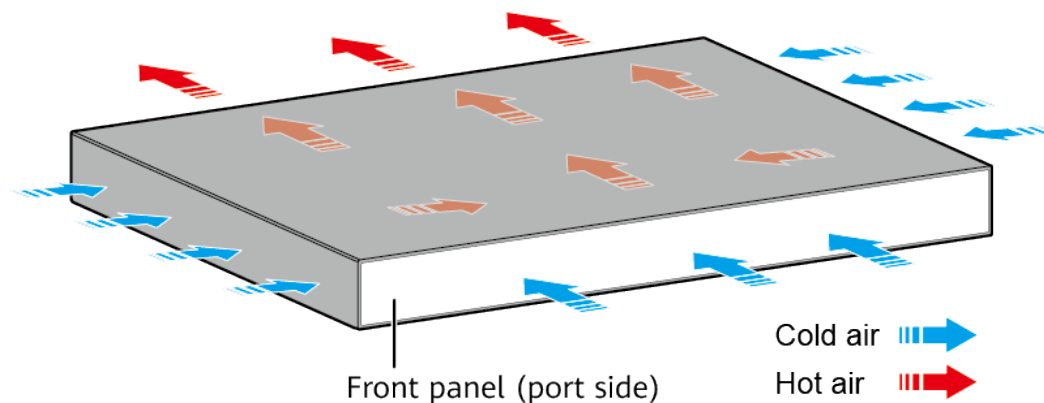
**Figure 4-350** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-350** Power supply connections of dual AC power modules



## Heat Dissipation

The S5720-36PC-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-868** lists technical specifications of the S5720-36PC-EI-AC.

**Table 4-868** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	80.05 years when no card is configured; 73.65 years when a 2-port 10GE SFP+ interface card is configured; 71.58 years when a 2-port 10GE RJ45 interface card is configured; 71.74 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> <li>Service ports on front panel: <math>\pm 6</math> kV in common mode</li> <li>Ports on the 2-port 10GE RJ45 rear interface card: <math>\pm 2</math> kV in common mode</li> </ul>
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	9.8 kg (21.61 lb)
Stack ports	<ul style="list-style-type: none"> <li>Ports on the 2-port 10GE SFP+ rear interface card</li> <li>Ports on the 2-port 10GE RJ45 rear interface card</li> <li>Ports on the 2-port QSFP+ rear stack card</li> </ul>
RTC	Supported
RPS	Not supported

Item	Description
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	74.6 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"><li>• Tested according to ATIS standard</li><li>• EEE enabled</li><li>• No PoE power consumption</li></ul>	<ul style="list-style-type: none"><li>• 39.5 W (without card)</li><li>• 47.28 W (with 2*10GE optical card)</li><li>• 52.17 W (with 2*QSFP+ stack card)</li><li>• 55.14 W (with 2*10GE electrical card)</li></ul>
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350BDQ

## 4.17.15 S5720-56PC-EI-AC

### Version Mapping

[Table 4-869](#) lists the mapping between the S5720-56PC-EI-AC chassis and software versions.

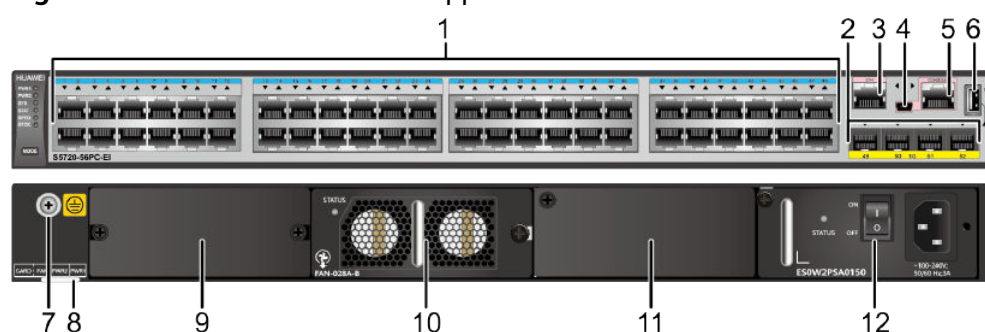


**Table 4-869** Version mapping

Series		Model	Software Version
S5720-EI	S5720-PC-EI	S5720-56PC-EI-AC	V200R007C00 to V200R019C10 versions <b>NOTE</b> This model does not match V200R007C10.

## Appearance and Structure

**Figure 4-351** S5720-56PC-EI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> </ul>
3	One ETH management port	4	One mini USB port
5	One console port <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	8	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.

9	<p>Rear card slot</p> <p><b>NOTE</b> Card supported:</p> <ul style="list-style-type: none"> <li>• <a href="#">8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series)</a></li> <li>• <a href="#">8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series)</a></li> <li>• <a href="#">8.29 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)</a></li> </ul>	1 0	<p>Fan slot</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.2 FAN-028A-B Fan Module</a></p>
1 1	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	1 2	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-870](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-870** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

A 1000BASE-X Ethernet optical port sends and receives service data at 1000 Mbit/s. [Table 4-871](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-871** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	1000 Mbit/s

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-872](#).

**Table 4-872** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-873](#) describes the attributes of an ETH management port.

**Table 4-873** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

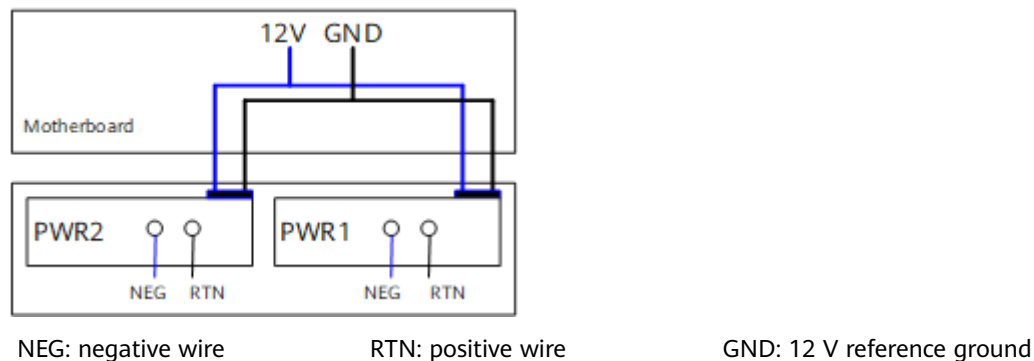
The S5720-56PC-EI-AC has similar indicators to those on the S5720-36C-PWR-EI-AC, except that the S5720-56PC-EI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-56PC-EI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

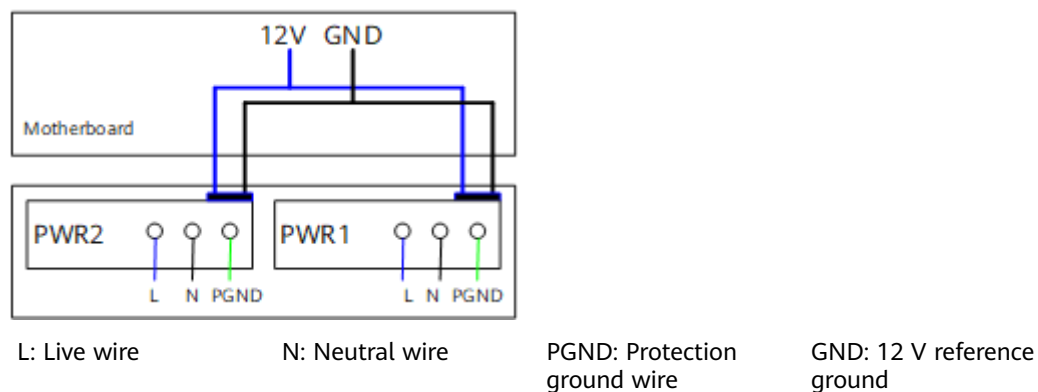
[Figure 4-352](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-352** Power supply connections of dual DC power modules



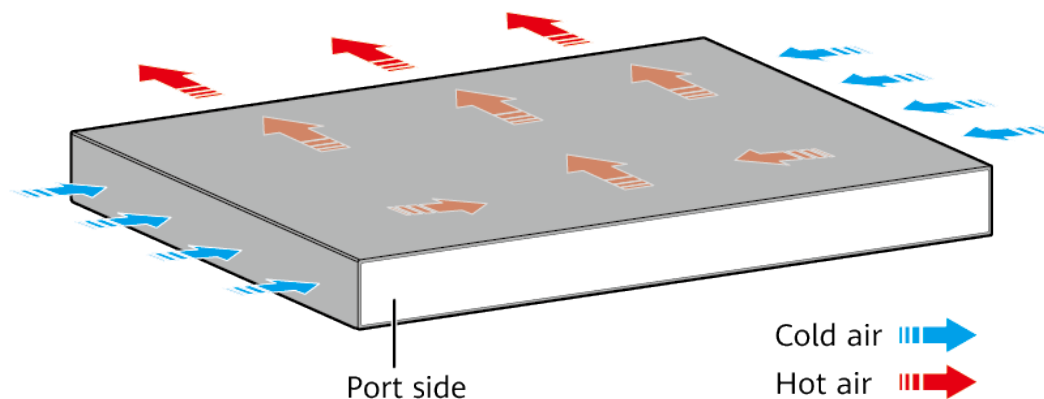
**Figure 4-353** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-353** Power supply connections of dual AC power modules



## Heat Dissipation

The S5720-56PC-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-874** lists technical specifications of the S5720-56PC-EI-AC.

**Table 4-874** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	71.18 years when no card is configured; 66.07 years when a 2-port 10GE SFP+ interface card is configured; 66.40 years when a 2-port 10GE RJ45 interface card is configured; 64.53 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> <li>Service ports on front panel: <math>\pm 6</math> kV in common mode</li> <li>Ports on the 2-port 10GE RJ45 rear interface card: <math>\pm 2</math> kV in common mode</li> </ul>
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	10 kg (22.05 lb)
Stack ports	<ul style="list-style-type: none"> <li>Ports on the 2-port 10GE SFP+ rear interface card</li> <li>Ports on the 2-port 10GE RJ45 rear interface card</li> <li>Ports on the 2-port QSFP+ rear stack card</li> </ul>
RTC	Supported
RPS	Not supported

Item	Description
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	85.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	<ul style="list-style-type: none"> <li>• 40.45 W (without card)</li> <li>• 47.78 W (with 2*10GE optical card)</li> <li>• 52.87 W (with 2*QSFP+ stack card)</li> <li>• 55.85 W (with 2*10GE electrical card)</li> </ul>
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)  <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350BDV

## 4.17.16 S5720-32X-EI-AC

### Version Mapping

[Table 4-875](#) lists the mapping between the S5720-32X-EI-AC chassis and software versions.

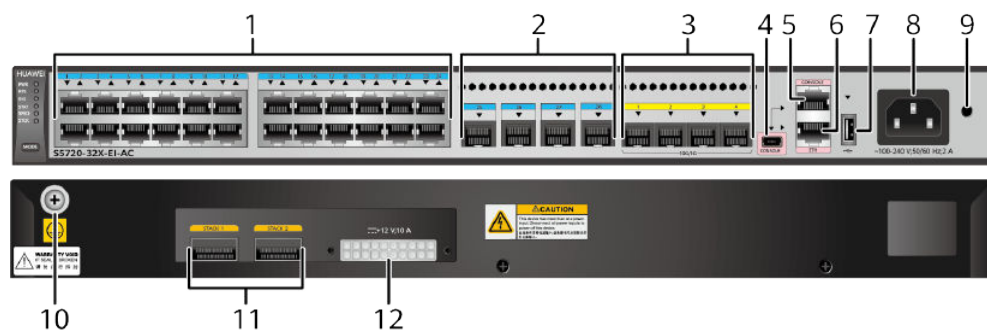


**Table 4-875** Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-32X-EI-AC	V200R007C00 to V200R019C10 versions  <b>NOTE</b> This model does not match V200R007C10.

## Appearance and Structure

**Figure 4-354** S5720-32X-EI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>
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3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>	4	One mini USB port
5	One console port <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One ETH management port
7	One USB port	8	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .
9	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	1 0	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .
1 1	Two QSFP+ stack optical ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>QSFP+ optical module (only QSFP-40G-SR4 and QSFP-40G-iSR supported)</b></li> <li>• <b>1 m, 3 m, and 5 m QSFP+ high-speed copper cables</b></li> </ul>	1 2	RPS socket <b>NOTE</b> It is used with an <b>RPS cable</b> , which is not hot swappable.

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-876](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-876** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-877](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-877** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-878](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-878** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 4-879](#) describes the attributes of a QSFP+ stack optical port.

**Table 4-879** Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-880](#).

**Table 4-880** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-881](#) describes the attributes of an ETH management port.

**Table 4-881** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

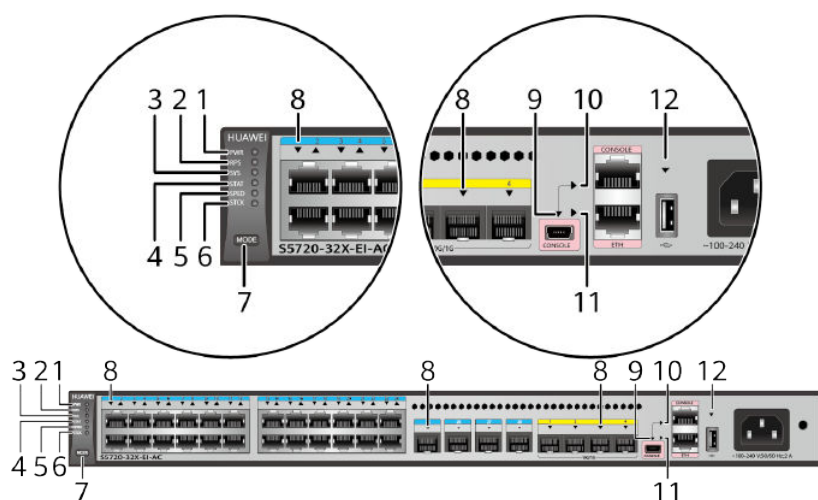
## Indicator Description

### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-355 Indicators on the S5720-32X-EI-AC



### NOTE

The S5720-EI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5720-EI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 4-882 Description of indicators on the switch

No.	Indicator/ Button	Name	Color	Status	Description
1	PWR	Power module	-	Off	The switch is powered off.

No.	Indicator/ Button	Name	Color	Status	Description
		indicator	Green	Steady on	The system power supply is normal.
			Yellow	Steady on	The built-in power module has failed, and the switch is receiving power from a redundant power supply (RPS).
2	RPS	RPS indicator	-	Off	The switch is not connected to an RPS.
			Green	Steady on	The RPS is in cold standby state.
			Green	Blinking	The RPS is supplying power to another switch.
			Yellow	Blinking	The RPS is supplying power to the local switch, and the built-in power module of the switch has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator/ Button	Name	Color	Status	Description
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>



No.	Indicator/ Button	Name	Color	Status	Description
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-883</a> and <a href="#">Table 4-884</a> .		
9	-	Mini USB indicator	-	Off	The Mini USB port is disabled, and the console port is enabled.
			Green	Steady on	The Mini USB port is enabled. When the Mini USB indicator is steady green, the console indicator is off.
10	-	Console indicator	-	Off	The console port is disabled, and the Mini USB port is enabled.
			Green	Steady on	The console port is enabled (default state). When the console indicator is steady green, the Mini USB indicator is off.
11	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
12	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.

No.	Indicator/ Button	Name	Color	Status	Description
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-883** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>

Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

**Table 4-884** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>

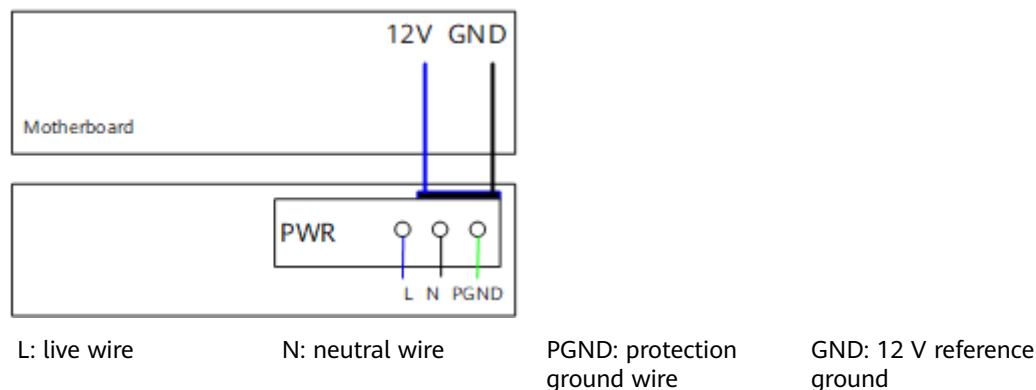
Display Mode	Color	Status	Description
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5720-32X-EI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

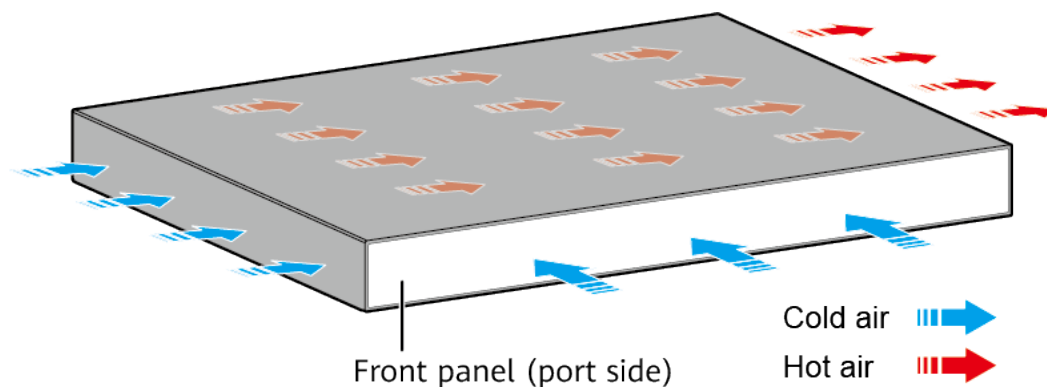
**Figure 4-356** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-356** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720-32X-EI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-885** lists technical specifications of the S5720-32X-EI-AC.

**Table 4-885** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	80.32 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)</li> </ul>
Weight (with packaging)	4.5 kg (9.92 lb)
Stack ports	<ul style="list-style-type: none"> <li>Two fixed QSFP+ stack ports on the rear card</li> </ul>
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	51.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	40.85 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02359586

### 4.17.17 S5720-32X-EI-DC

## Version Mapping

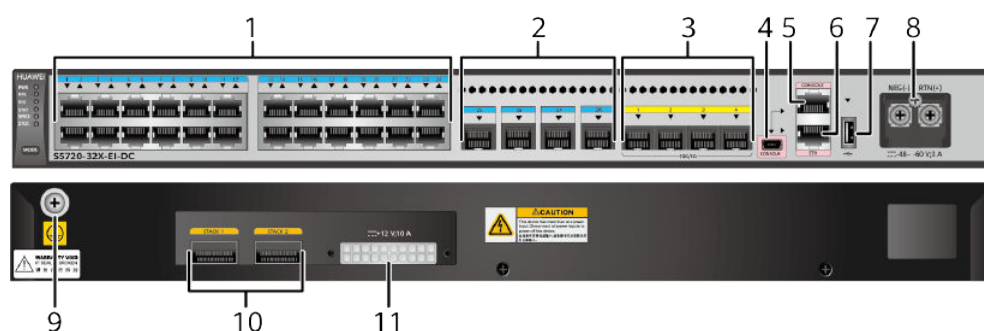
**Table 4-886** lists the mapping between the S5720-32X-EI-DC chassis and software versions.

**Table 4-886** Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-32X-EI-DC	V200R009C00 to V200R019C10 versions

## Appearance and Structure

**Figure 4-357** S5720-32X-EI-DC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• FE optical module</li> <li>• GE optical module</li> <li>• GE-CWDM optical module</li> <li>• GE-DWDM optical module</li> <li>• GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</li> </ul>
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3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>	4	One mini USB port
5	One console port <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One ETH management port
7	One USB port	8	DC power terminal <b>NOTE</b> It is used together with a <b>DC Power Cable</b> .
9	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	10	Two QSFP+ stack optical ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>QSFP+ optical module</b> (only QSFP-40G-SR4 and QSFP-40G-iSR supported)</li> <li>• <b>1 m, 3 m, and 5 m QSFP+ high-speed copper cables</b></li> </ul>
11	RPS socket <b>NOTE</b> It is used with an <b>RPS cable</b> , which is not hot swappable.	-	-



## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-887](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-887** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-888](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-888** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-889](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-889** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 4-890](#) describes the attributes of a QSFP+ stack optical port.

**Table 4-890** Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-891](#).

**Table 4-891** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-892](#) describes the attributes of an ETH management port.

**Table 4-892** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

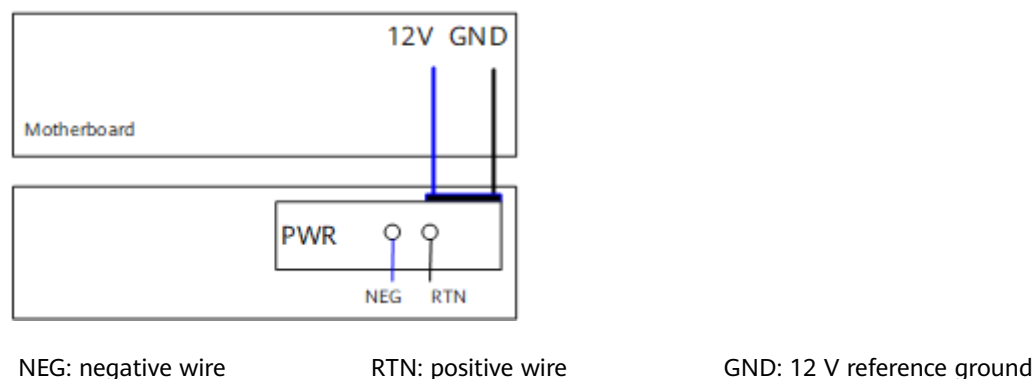
The S5720-32X-EI-DC has the same types of indicators as the S5720-32X-EI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-32X-EI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

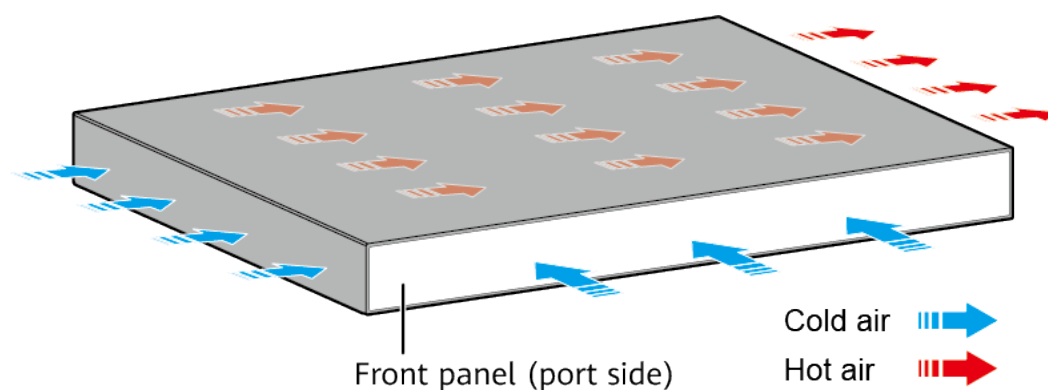
**Figure 4-358** shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

**Figure 4-358** Power supply by a single DC power module



## Heat Dissipation

The S5720-32X-EI-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-893** lists technical specifications of the S5720-32X-EI-DC.

**Table 4-893** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	80.32 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 1$ kV in differential mode, $\pm 2$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)</li> </ul>
Weight (with packaging)	4.3 kg (9.48 lb)
Stack ports	<ul style="list-style-type: none"> <li>Two fixed QSFP+ stack ports on the rear card</li> </ul>
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	51.9 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"><li>• Tested according to ATIS standard</li><li>• EEE enabled</li><li>• No PoE power consumption</li></ul>	40.85 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02350NHC

## 4.17.18 S5720-32X-EI-24S-AC

### Version Mapping

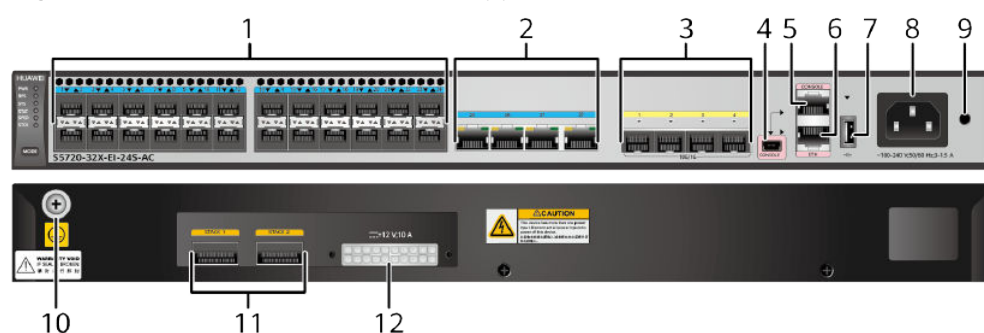
**Table 4-894** lists the mapping between the S5720-32X-EI-24S-AC chassis and software versions.

**Table 4-894** Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-32X-EI-24S-AC	V200R007C00 to V200R019C10 versions <b>NOTE</b> This model does not match V200R007C10.

## Appearance and Structure

**Figure 4-359** S5720-32X-EI-24S-AC appearance



1	<p>Twenty-four 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>	2	Four 10/100/1000BASE-T ports
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>	4	<p>One mini USB port</p>
5	<p>One console port</p> <p><b>NOTE</b>                  It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	<p>One ETH management port</p>
7	<p>One USB port</p>	8	<p>AC socket</p> <p><b>NOTE</b>                  It is used with an <b>AC power cable</b>.</p>
9	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b>                  The AC power cable locking strap is not delivered with the switch.</p>	1 0	<p>Ground screw</p> <p><b>NOTE</b>                  It is used with a <b>ground cable</b>.</p>
1 1	<p>Two QSFP+ stack optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>QSFP+ optical module (only QSFP-40G-SR4 and QSFP-40G-iSR supported)</b></li> <li>• <b>1 m, 3 m, and 5 m QSFP+ high-speed copper cables</b></li> </ul>	1 2	<p>RPS socket</p> <p><b>NOTE</b>                  It is used with an <b>RPS cable</b>, which is not hot swappable.</p>



## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-895](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-895** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-896](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-896** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-897](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-897** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 4-898](#) describes the attributes of a QSFP+ stack optical port.

**Table 4-898** Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-899](#).

**Table 4-899** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-900](#) describes the attributes of an ETH management port.

**Table 4-900** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-32X-EI-24S-AC has 24 downlink optical port indicators, whereas the S5720-32X-EI-AC has 24 downlink electrical port indicators. Symbols and

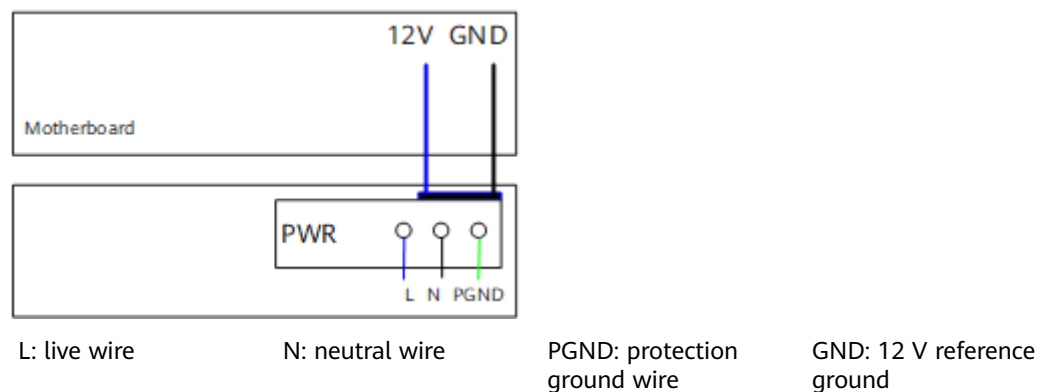
meanings of other indicators on the two switch models are the same. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-32X-EI-24S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

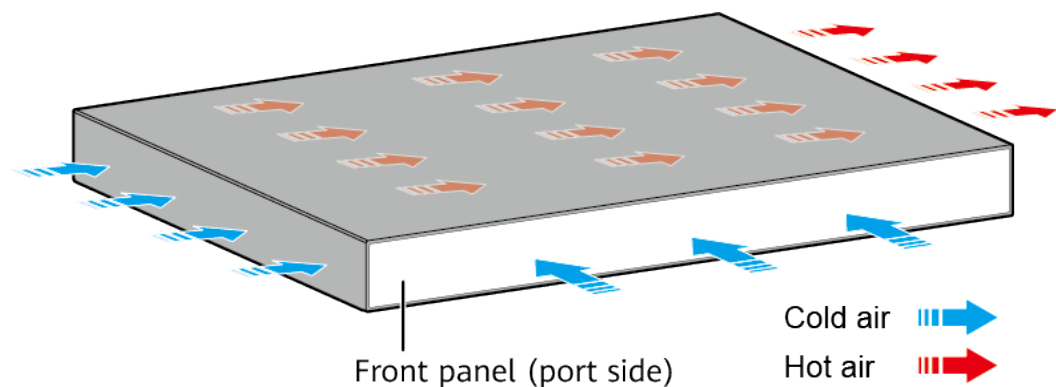
**Figure 4-360** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-360** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720-32X-EI-24S-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-901** lists technical specifications of the S5720-32X-EI-24S-AC.

**Table 4-901** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	82.54 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)</li> </ul>
Weight (with packaging)	4.5 kg (9.92 lb)
Stack ports	<ul style="list-style-type: none"> <li>Two fixed QSFP+ stack ports on the rear card</li> </ul>
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	58.9 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"><li>• Tested according to ATIS standard</li><li>• EEE enabled</li><li>• No PoE power consumption</li></ul>	55.46 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02359579

## 4.17.19 S5720-32X-EI-24S-DC

### Version Mapping

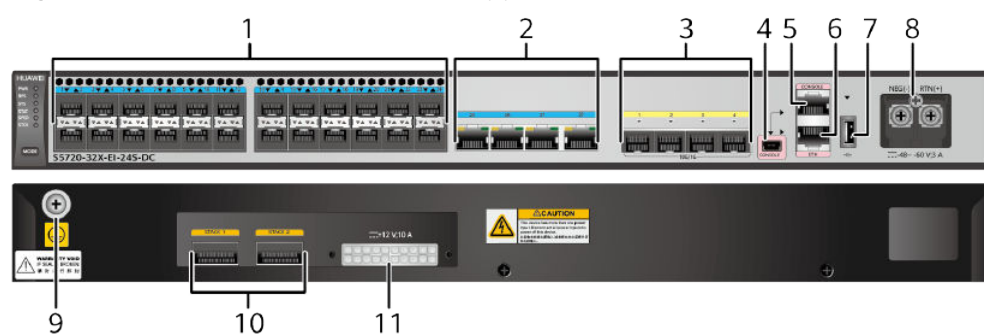
**Table 4-902** lists the mapping between the S5720-32X-EI-24S-DC chassis and software versions.

**Table 4-902** Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-32X-EI-24S-DC	V200R009C00 to V200R019C10 versions

## Appearance and Structure

**Figure 4-361** S5720-32X-EI-24S-DC appearance



1	Twenty-four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>	2	Four 10/100/1000BASE-T ports
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>	4	One mini USB port
5	<p>One console port</p> <p><b>NOTE</b>  It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One ETH management port
7	One USB port	8	<p>DC power terminal</p> <p><b>NOTE</b>  It is used together with a <b>DC Power Cable</b>.</p>
9	<p>Ground screw</p> <p><b>NOTE</b>  It is used with a <b>ground cable</b>.</p>	10	<p>Two QSFP+ stack optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>QSFP+ optical module</b> (only QSFP-40G-SR4 and QSFP-40G-iSR supported)</li> <li>• <b>1 m, 3 m, and 5 m QSFP+ high-speed copper cables</b></li> </ul>
11	<p>RPS socket</p> <p><b>NOTE</b>  It is used with an <b>RPS cable</b>, which is not hot swappable.</p>	-	-



## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-903](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-903** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-904](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-904** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-905](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-905** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 4-906](#) describes the attributes of a QSFP+ stack optical port.

**Table 4-906** Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-907](#).

**Table 4-907** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-908](#) describes the attributes of an ETH management port.

**Table 4-908** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-32X-EI-24S-DC has 24 downlink optical port indicators, whereas the S5720-32X-EI-AC has 24 downlink electrical port indicators. Symbols and

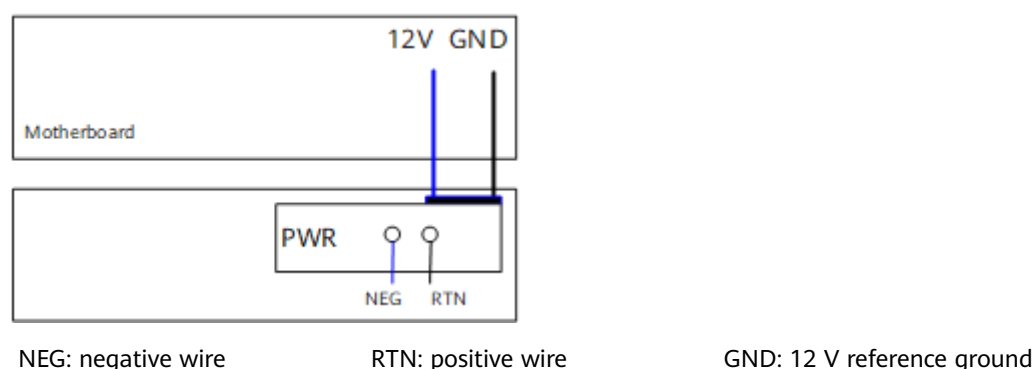
meanings of other indicators on the two switch models are the same. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-32X-EI-24S-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

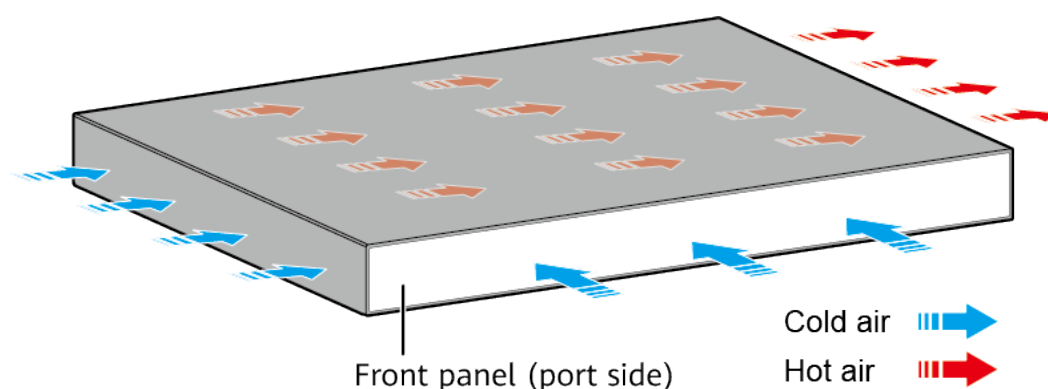
[Figure 4-362](#) shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

**Figure 4-362** Power supply by a single DC power module



## Heat Dissipation

The S5720-32X-EI-24S-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-909](#) lists technical specifications of the S5720-32X-EI-24S-DC.

**Table 4-909** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	82.54 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 1$ kV in differential mode, $\pm 2$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)</li> </ul>
Weight (with packaging)	4.2 kg (9.26 lb)
Stack ports	<ul style="list-style-type: none"> <li>Two fixed QSFP+ stack ports on the rear card</li> </ul>
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	58.9 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	55.46 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350NHE

## 4.17.20 S5720-50X-EI-AC

### Version Mapping

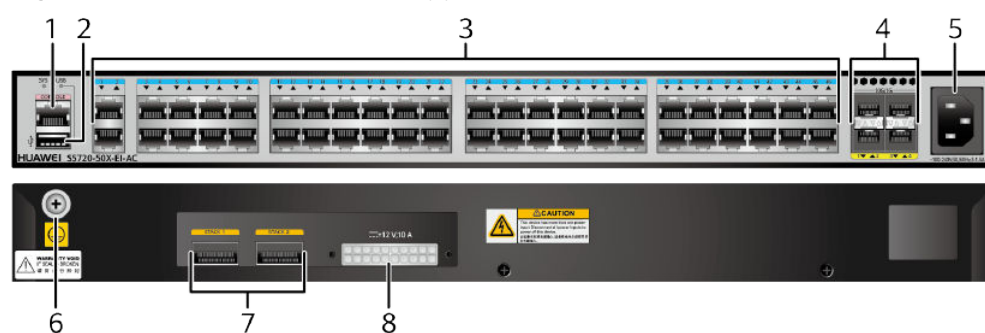
**Table 4-910** lists the mapping between the S5720-50X-EI-AC chassis and software versions.

**Table 4-910** Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-50X-EI-AC	V200R007C00 to V200R019C10 versions  <b>NOTE</b> This model does not match V200R007C10.

## Appearance and Structure

**Figure 4-363** S5720-50X-EI-AC appearance



1	One console port  <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	2	One USB port
---	--	---	--------------

3	Forty-six 10/100/1000BASE-T ports	4	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>
5	<p>AC socket</p> <p><b>NOTE</b> It is used with an <b>AC power cable</b>.</p>	6	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>
7	<p>Two QSFP+ stack optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>QSFP+ optical module</b> (only QSFP-40G-SR4 and QSFP-40G-iSR supported)</li> <li>• <b>1 m, 3 m, and 5 m QSFP+ high-speed copper cables</b></li> </ul>	8	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <b>RPS cable</b>, which is not hot swappable.</p>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 4-911** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.



**Table 4-911** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-912](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-912** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 4-913](#) describes the attributes of a QSFP+ stack optical port.

**Table 4-913** Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-914](#).

**Table 4-914** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

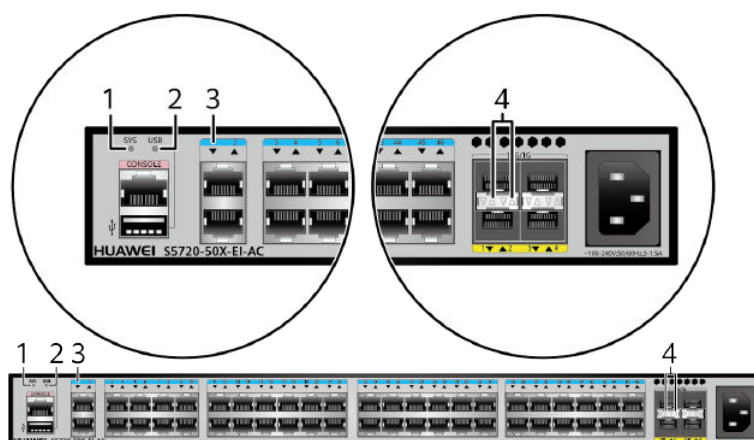
The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

**Figure 4-364** Indicators on the S5720-50X-EI-AC



**Table 4-915** Description of indicators on the switch

No.	Indicator/ Button	Name	Color	Status	Description
1	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
2	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.
3	-	Service port indicator (one indicator for each port)	-	Off	The port is not connected or has been shut down.
			Green	Steady on	The port is connected.
			Green	Blinking	The port is sending or receiving data.

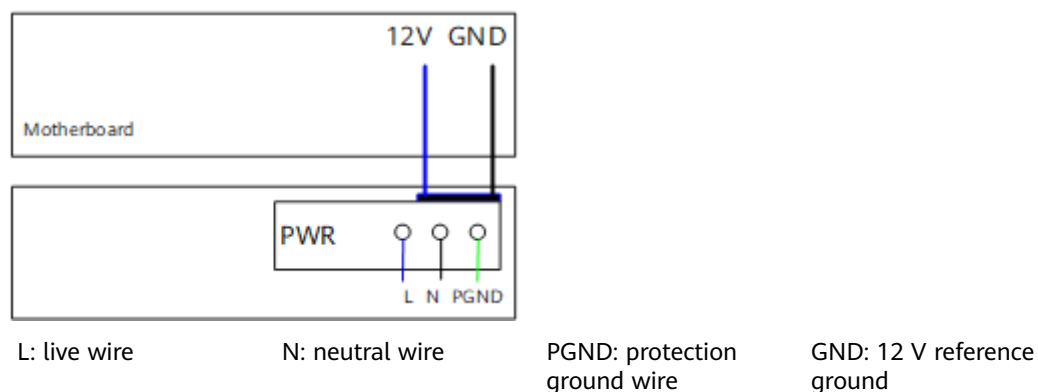
No.	Indicator/ Button	Name	Color	Status	Description
4	-	Service port indicator (two indicators for each port)	-	Off	The port is not connected or has been shut down.
			Green	Steady on	The port is connected.
			Yellow	Blinking	The port is sending or receiving data.

## Power Supply Configuration

The S5720-50X-EI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

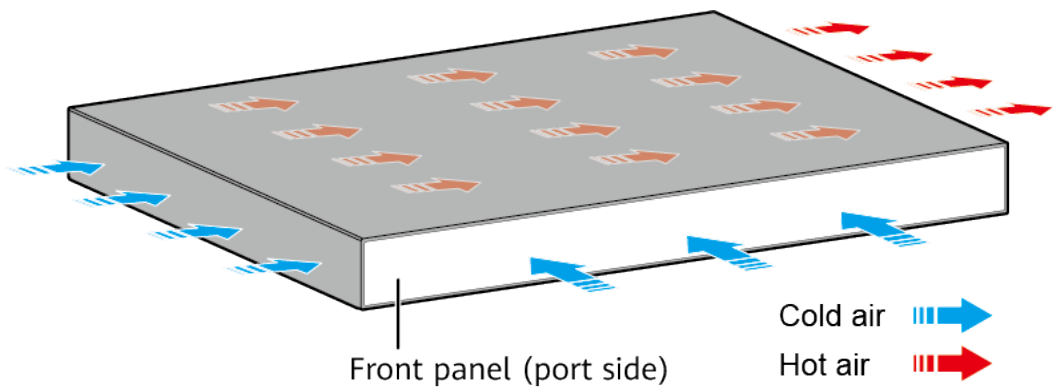
**Figure 4-365** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-365** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720-50X-EI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-916** lists technical specifications of the S5720-50X-EI-AC.

**Table 4-916** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	74.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 229.9 mm (1.72 in. x 17.4 in. x 9.05 in.)</li> </ul>
Weight (with packaging)	4.9 kg (10.81 lb)

Item	Description
Stack ports	<ul style="list-style-type: none"> <li>Two fixed QSFP+ stack ports on the rear card</li> </ul>
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	55.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	47.45 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02359592

## 4.17.21 S5720-50X-EI-DC

### Version Mapping

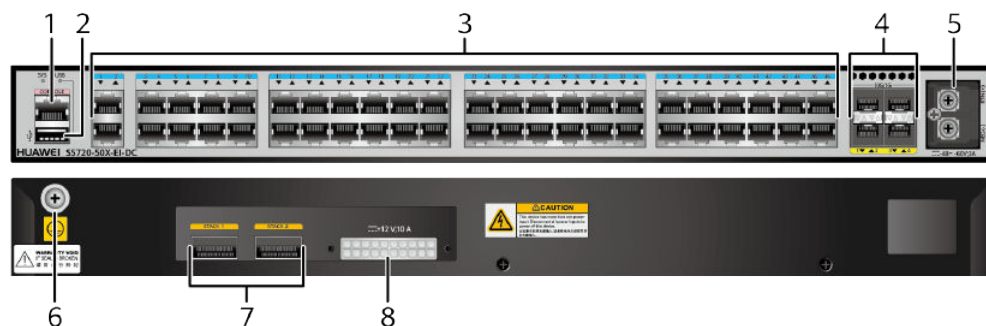
[Table 4-917](#) lists the mapping between the S5720-50X-EI-DC chassis and software versions.

**Table 4-917** Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-50X-EI-DC	V200R009C00 to V200R019C10 versions

### Appearance and Structure

**Figure 4-366** S5720-50X-EI-DC appearance



1	One console port  <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	2	One USB port
---	--	---	--------------

3	Forty-six 10/100/1000BASE-T ports	4	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>
5	<p>DC power terminal</p> <p><b>NOTE</b> It is used together with a <b>DC Power Cable</b>.</p>	6	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>
7	<p>Two QSFP+ stack optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>QSFP+ optical module</b> (only QSFP-40G-SR4 and QSFP-40G-iSR supported)</li> <li>• <b>1 m, 3 m, and 5 m QSFP+ high-speed copper cables</b></li> </ul>	8	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <b>RPS cable</b>, which is not hot swappable.</p>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 4-918](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.



**Table 4-918** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-919](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-919** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 4-920](#) describes the attributes of a QSFP+ stack optical port.

**Table 4-920** Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-921](#).

**Table 4-921** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

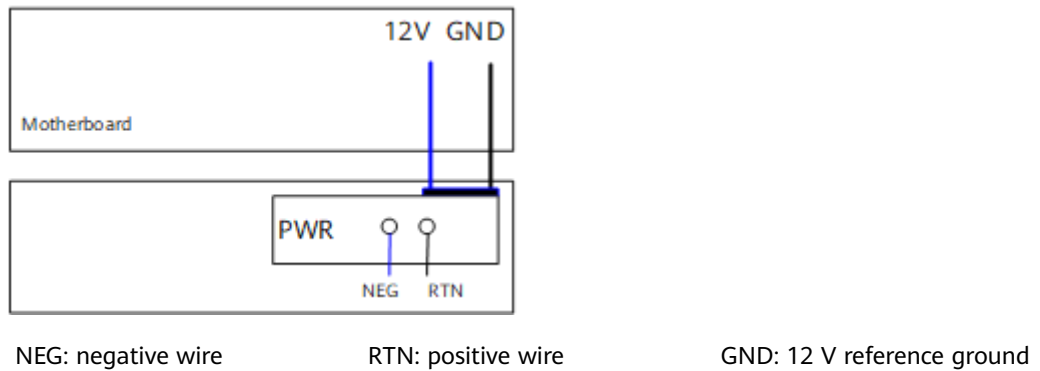
The S5720-50X-EI-DC has the same types of indicators as the S5720-50X-EI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-50X-EI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

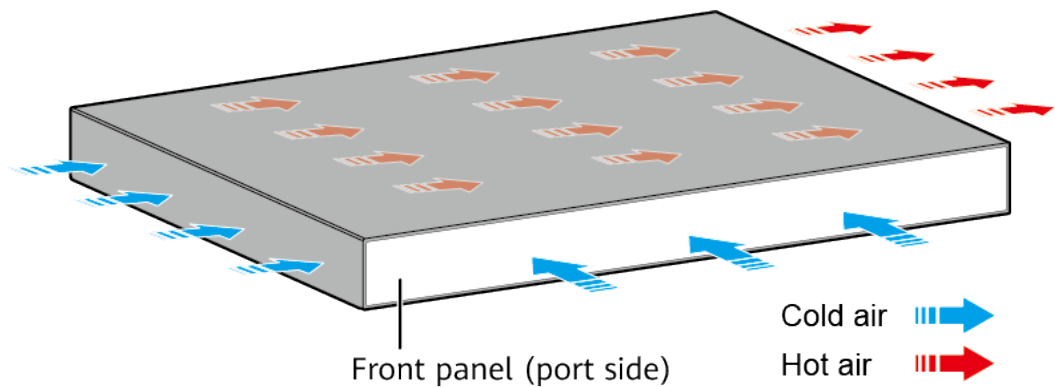
[Figure 4-367](#) shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

**Figure 4-367** Power supply by a single DC power module



## Heat Dissipation

The S5720-50X-EI-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-922](#) lists technical specifications of the S5720-50X-EI-DC.

**Table 4-922** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	74.31 years

Item	Description
Mean time to repair (MTTR)	2
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 1$ kV in differential mode, $\pm 2$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 229.9 mm (1.72 in. x 17.4 in. x 9.05 in.)</li> </ul>
Weight (with packaging)	4.7 kg (10.36 lb)
Stack ports	<ul style="list-style-type: none"> <li>Two fixed QSFP+ stack ports on the rear card</li> </ul>
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	55.3 W
Typical power consumption (30% of traffic load)	47.45 W
	<ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350NHD

## 4.17.22 S5720-50X-EI-46S-AC

### Version Mapping

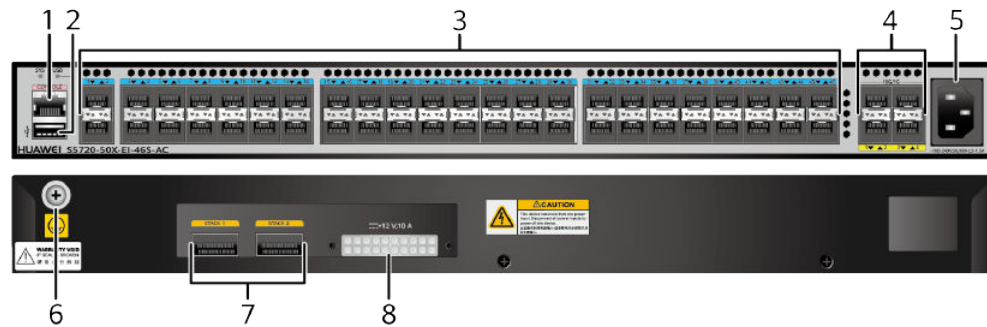
[Table 4-923](#) lists the mapping between the S5720-50X-EI-46S-AC chassis and software versions.

**Table 4-923** Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-50X-EI-46S-AC	V200R007C00 to V200R019C10 versions <b>NOTE</b> This model does not match V200R007C10.

## Appearance and Structure

Figure 4-368 S5720-50X-EI-46S-AC appearance



1	<p>One console port</p> <p><b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	2	<p>One USB port</p>
3	<p>Forty-six 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>	4	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>
5	<p>AC socket</p> <p><b>NOTE</b> It is used with an <b>AC power cable</b>.</p>	6	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>

7	<p>Two QSFP+ stack optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>QSFP+ optical module</b> (only QSFP-40G-SR4 and QSFP-40G-iSR supported)</li> <li>• <b>1 m, 3 m, and 5 m QSFP+ high-speed copper cables</b></li> </ul>	8	<p>RPS socket</p> <p><b>NOTE</b></p> <p>It is used with an <b>RPS cable</b>, which is not hot swappable.</p>
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## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-924](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-924** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-925](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-925** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 4-926](#) describes the attributes of a QSFP+ stack optical port.

**Table 4-926** Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-927](#).

**Table 4-927** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.



## Indicator Description

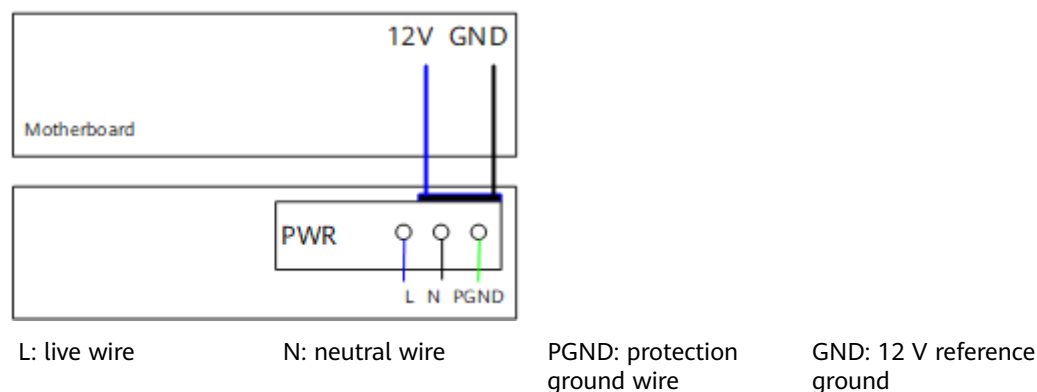
The S5720-50X-EI-46S-AC has 46 downlink optical port indicators, whereas the S5720-50X-EI-AC has 46 downlink electrical port indicators. Symbols and meanings of other indicators on the two switch models are the same. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-50X-EI-46S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

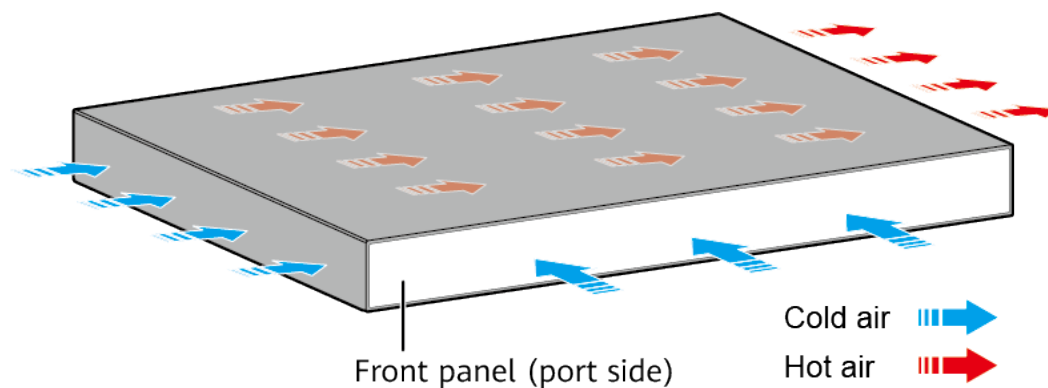
[Figure 4-369](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-369** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720-50X-EI-46S-AC has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-928** lists technical specifications of the S5720-50X-EI-46S-AC.

**Table 4-928** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	67.59 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	NA
Power supply surge protection	±6 kV in differential mode, ±6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 229.9 mm (1.72 in. x 17.4 in. x 9.05 in.)</li> </ul>
Weight (with packaging)	5 kg (11.03 lb)
Stack ports	<ul style="list-style-type: none"> <li>Two fixed QSFP+ stack ports on the rear card</li> </ul>
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	81.5 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"><li>• Tested according to ATIS standard</li><li>• EEE enabled</li><li>• No PoE power consumption</li></ul>	73.75 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02359583

### 4.17.23 S5720-50X-EI-46S-DC

## Version Mapping

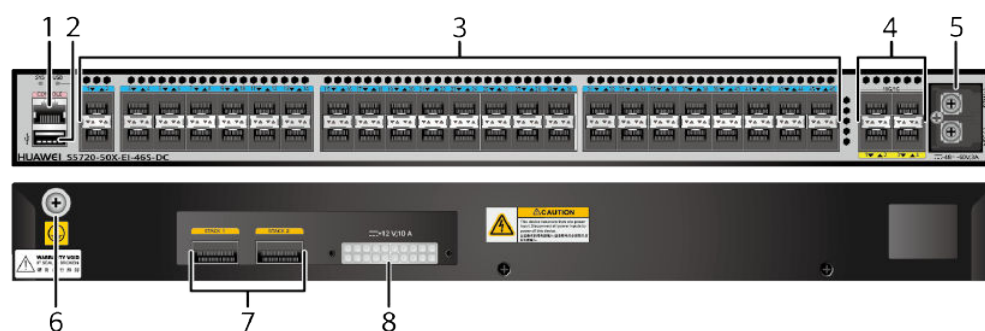
**Table 4-929** lists the mapping between the S5720-50X-EI-46S-DC chassis and software versions.

**Table 4-929** Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-50X-EI-46S-DC	V200R009C00 to V200R019C10 versions

## Appearance and Structure

**Figure 4-370** S5720-50X-EI-46S-DC appearance



1	<p>One console port</p> <p><b>NOTE</b></p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	2	<p>One USB port</p>
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3	<p>Forty-six 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>	4	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>
5	<p>DC power terminal</p> <p><b>NOTE</b> It is used together with a <b>DC Power Cable</b>.</p>	6	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>
7	<p>Two QSFP+ stack optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>QSFP+ optical module</b> (only QSFP-40G-SR4 and QSFP-40G-iSR supported)</li> <li>• <b>1 m, 3 m, and 5 m QSFP+ high-speed copper cables</b></li> </ul>	8	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <b>RPS cable</b>, which is not hot swappable.</p>

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-930](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-930** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-931](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-931** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 4-932](#) describes the attributes of a QSFP+ stack optical port.

**Table 4-932** Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

## Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-933](#).

**Table 4-933** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

## USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

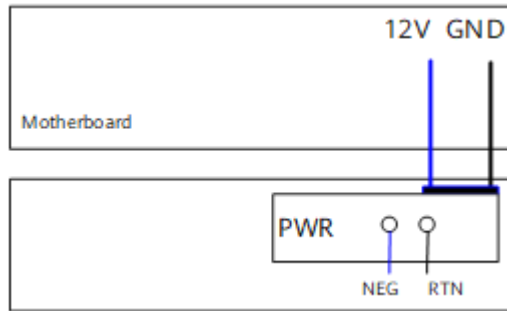
The S5720-50X-EI-46S-DC has 46 downlink optical port indicators, whereas the S5720-50X-EI-AC has 46 downlink electrical port indicators. Symbols and meanings of other indicators on the two switch models are the same. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-50X-EI-46S-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 4-371](#) shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

**Figure 4-371** Power supply by a single DC power module



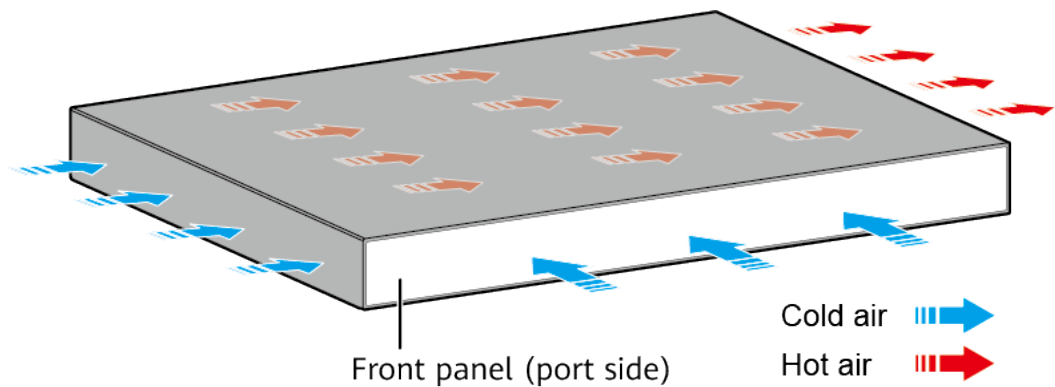
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

## Heat Dissipation

The S5720-50X-EI-46S-DC has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-934](#) lists technical specifications of the S5720-50X-EI-46S-DC.

**Table 4-934** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	67.59 years



Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	NA
Power supply surge protection	±1 kV in differential mode, ±2 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)</li> </ul>
Weight (with packaging)	4.8 kg (10.59 lb)
Stack ports	<ul style="list-style-type: none"> <li>Two fixed QSFP+ stack ports on the rear card</li> </ul>
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	81.5 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	73.75 W

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350NHF

## 4.17.24 S5720-52X-EI-AC

### Version Mapping

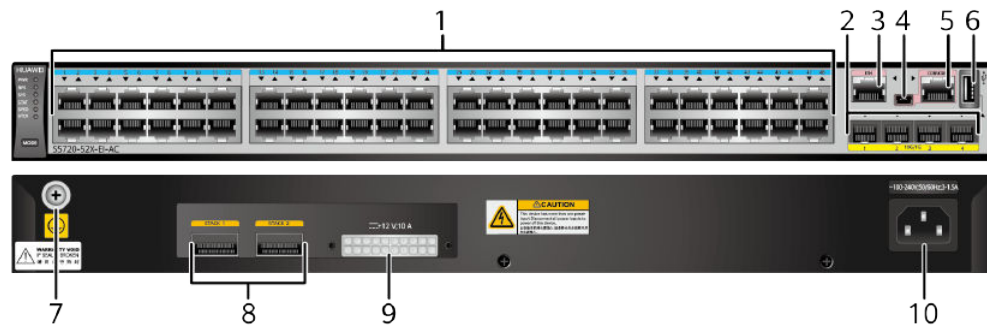
[Table 4-935](#) lists the mapping between the S5720-52X-EI-AC chassis and software versions.

**Table 4-935** Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-52X-EI-AC	V200R007C00 to V200R019C10 versions <b>NOTE</b> This model does not match V200R007C10.

## Appearance and Structure

Figure 4-372 S5720-52X-EI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> </ul>
3	One ETH management port	4	One mini USB port
5	One console port <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Two QSFP+ stack optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <a href="#">QSFP+ optical module</a> (only QSFP-40G-SR4 and QSFP-40G-iSR supported)</li> <li>• <a href="#">1 m, 3 m, and 5 m QSFP+ high-speed copper cables</a></li> </ul>
9	<p>RPS socket</p> <p><b>NOTE</b> It is used with an <a href="#">RPS cable</a>, which is not hot swappable.</p>	10	<p>AC socket</p> <p><b>NOTE</b> It is used with an <a href="#">AC power cable</a>.</p>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-936](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-936** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-937](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-937** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 4-938](#) describes the attributes of a QSFP+ stack optical port.

**Table 4-938** Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-939](#).

**Table 4-939** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 4-940** describes the attributes of an ETH management port.

**Table 4-940** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

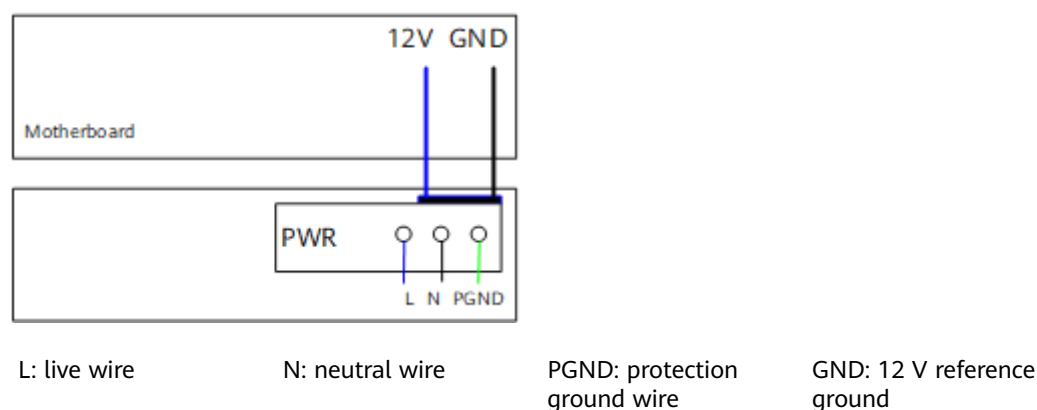
The S5720-52X-EI-AC has the same types of indicators as the S5720-32X-EI-AC. For details, see **Indicator Description**.

## Power Supply Configuration

The S5720-52X-EI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

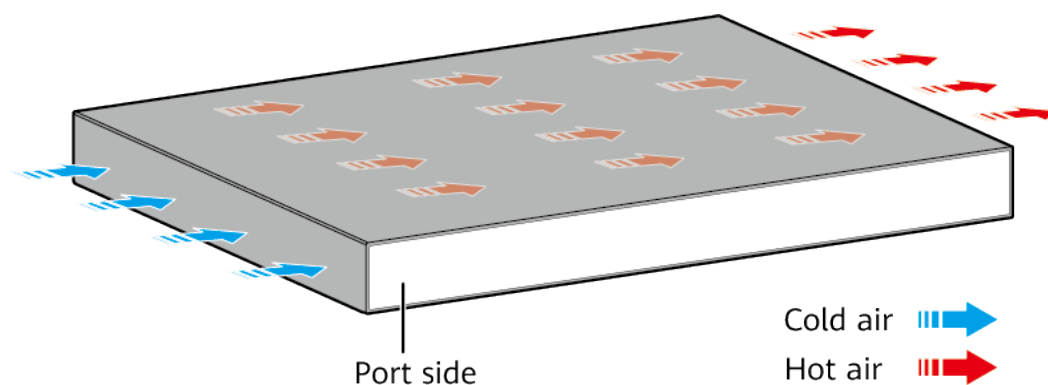
**Figure 4-373** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-373** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720-52X-EI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-941** lists technical specifications of the S5720-52X-EI-AC.

**Table 4-941** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	73.12 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"><li>• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)</li><li>• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)</li></ul>
Weight (with packaging)	4.7 kg (10.36 lb)
Stack ports	<ul style="list-style-type: none"><li>• Two fixed QSFP+ stack ports on the rear card</li></ul>
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	61.5 W



Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	52.25 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02359589

## 4.17.25 S5720-32P-EI-AC

### Version Mapping

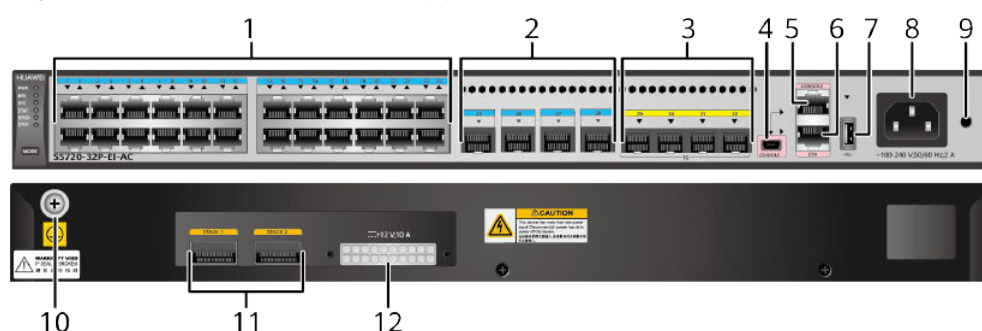
[Table 4-942](#) lists the mapping between the S5720-32P-EI-AC chassis and software versions.

**Table 4-942** Version mapping

Series		Model	Software Version
S5720-EI	S5720-P-EI	S5720-32P-EI-AC	V200R007C00 to V200R019C10 versions <b>NOTE</b> This model does not match V200R007C10.

## Appearance and Structure

**Figure 4-374** S5720-32P-EI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>
3	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> </ul>	4	One mini USB port

5	One console port <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One ETH management port
7	One USB port	8	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .
9	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	10	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .
11	Two QSFP+ stack optical ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <a href="#">QSFP+ optical module</a> (only QSFP-40G-SR4 and QSFP-40G-iSR supported)</li> <li>• <a href="#">1 m, 3 m, and 5 m QSFP+ high-speed copper cables</a></li> </ul>	12	RPS socket <b>NOTE</b> It is used with an <a href="#">RPS cable</a> , which is not hot swappable.

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-943](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-943** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-944](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-944** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### 1000BASE-X port

A 1000BASE-X Ethernet optical port sends and receives service data at 1000 Mbit/s. [Table 4-945](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-945** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	1000 Mbit/s

### QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 4-946](#) describes the attributes of a QSFP+ stack optical port.

**Table 4-946** Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-947](#).

**Table 4-947** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-948](#) describes the attributes of an ETH management port.

**Table 4-948** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3

Attribute	Description
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

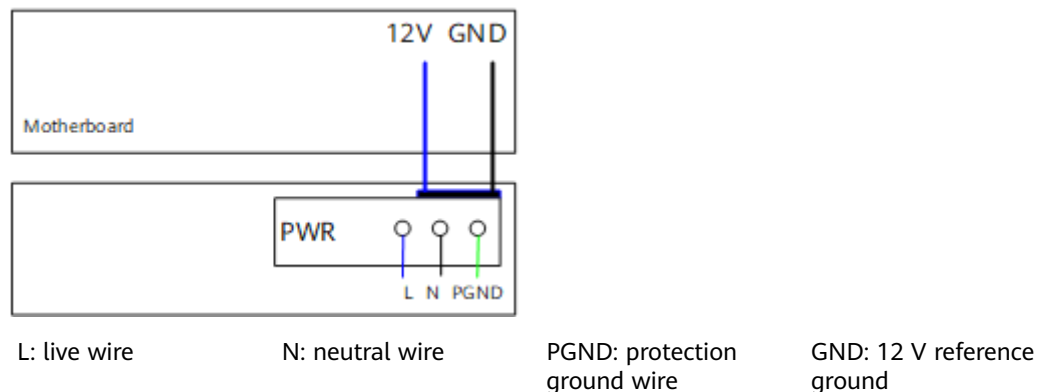
The S5720-32P-EI-AC has the same types of indicators as the S5720-32X-EI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-32P-EI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

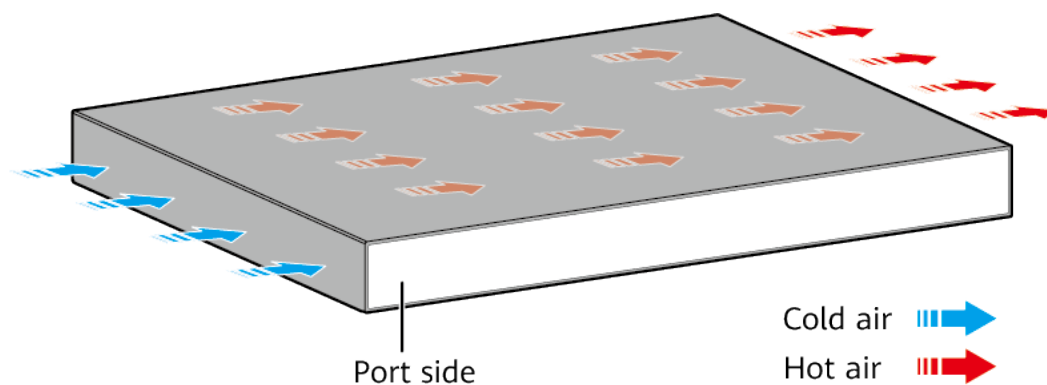
**Figure 4-375** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-375** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720-32P-EI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-949** lists technical specifications of the S5720-32P-EI-AC.

**Table 4-949** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	80.32 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)</li> </ul>
Weight (with packaging)	4.5 kg (9.92 lb)
Stack ports	<ul style="list-style-type: none"> <li>Two fixed QSFP+ stack ports on the rear card</li> </ul>
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	50.7 W
Typical power consumption (30% of traffic load)	39.75 W
	<ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>



Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350BDY

## 4.17.26 S5720-52P-EI-AC

### Version Mapping

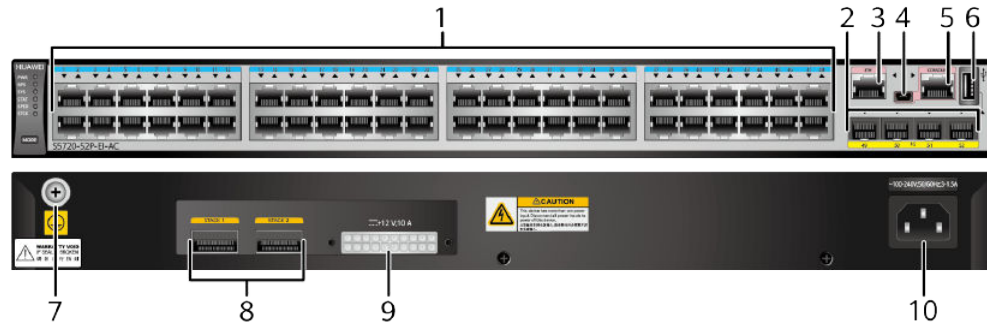
**Table 4-950** lists the mapping between the S5720-52P-EI-AC chassis and software versions.

**Table 4-950** Version mapping

Series		Model	Software Version
S5720-EI	S5720-P-EI	S5720-52P-EI-AC	V200R007C00 to V200R019C10 versions <b>NOTE</b> This model does not match V200R007C10.

## Appearance and Structure

Figure 4-376 S5720-52P-EI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (only 1000 Mbit/s supported)</b></li> </ul>
3	One ETH management port	4	One mini USB port
5	One console port <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	8	Two QSFP+ stack optical ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>QSFP+ optical module</b> (only QSFP-40G-SR4 and QSFP-40G-iSR supported)</li> <li>• <b>1 m, 3 m, and 5 m QSFP+ high-speed copper cables</b></li> </ul>
9	RPS socket <b>NOTE</b> It is used with an <b>RPS cable</b> , which is not hot swappable.	10	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-951](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-951** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

A 1000BASE-X Ethernet optical port sends and receives service data at 1000 Mbit/s. [Table 4-952](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-952** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	1000 Mbit/s

### QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 4-953](#) describes the attributes of a QSFP+ stack optical port.

**Table 4-953** Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-954](#).

**Table 4-954** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-955](#) describes the attributes of an ETH management port.

**Table 4-955** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

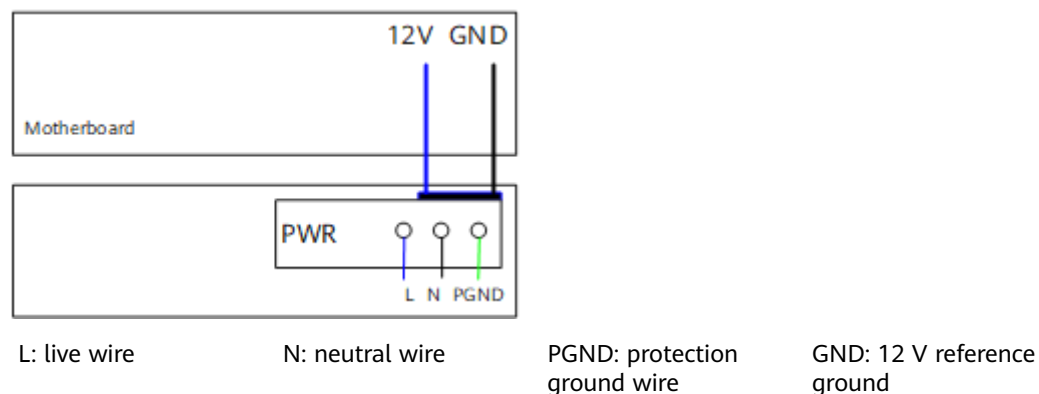
The S5720-52P-EI-AC has the same types of indicators as the S5720-32X-EI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-52P-EI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

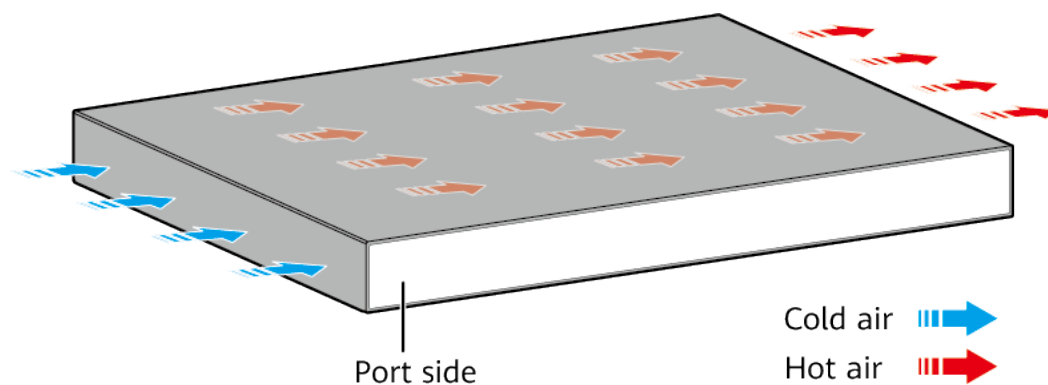
**Figure 4-377** shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

**Figure 4-377** Power supply mode of a built-in AC power module



## Heat Dissipation

The S5720-52P-EI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-956** lists technical specifications of the S5720-52P-EI-AC.

**Table 4-956** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	73.12 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 224.9 mm (1.72 in. x 17.4 in. x 8.85 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 237.3 mm (1.72 in. x 17.4 in. x 9.34 in.)</li> </ul>
Weight (with packaging)	4.7 kg (10.36 lb)
Stack ports	<ul style="list-style-type: none"> <li>Two fixed QSFP+ stack ports on the rear card</li> </ul>
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	60.3 W
Typical power consumption (30% of traffic load)	51.14 W
	<ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02350BEC

## 4.18 S5730S-EI

### 4.18.1 S5730S-48C-EI-AC

#### Version Mapping

[Table 4-957](#) lists the mapping between the S5730S-48C-EI-AC chassis and software versions.

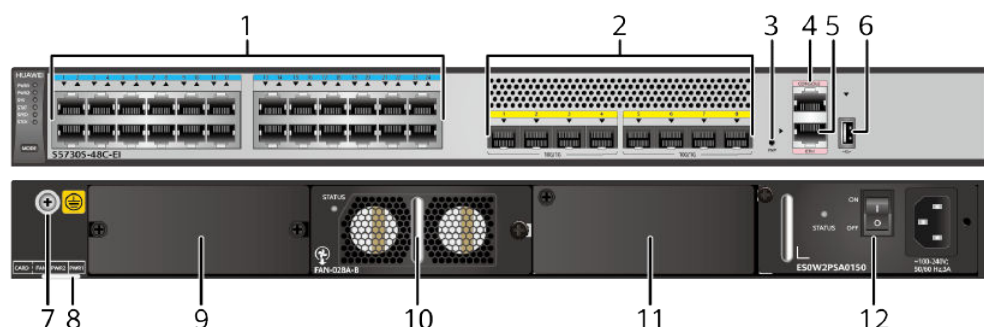
**Table 4-957** Version mapping

Series	Model	Software Version
S5730S-EI	S5730S-48C-EI-AC	V200R011C10 to V200R019C10 versions



## Appearance and Structure

Figure 4-378 S5730S-48C-EI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Eight 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One PNP button <b>NOTICE</b> Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	4	One console port <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.
5	One ETH management port	6	One USB port

7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <a href="#">ES5D21Q04Q01</a></li> <li>• <a href="#">ES5D21VST000</a> (applicable in V200R012C00 and later versions)</li> </ul>	10	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">FAN-028A-B</a>
11	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	12	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>

## Interface Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-958](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-958** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-959](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-959** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-960](#).

**Table 4-960** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-961](#) describes the attributes of an ETH management port.

**Table 4-961** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

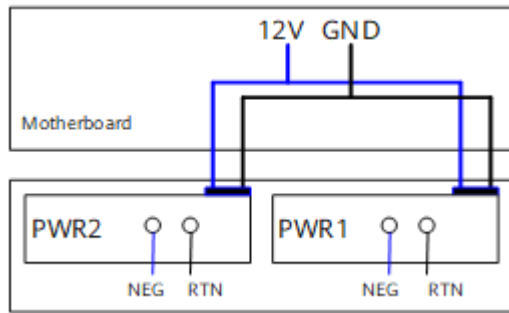
The S5730S-48C-EI-AC has similar indicators to those of the S5730S-68C-PWR-EI except that the S5730S-48C-EI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5730S-48C-EI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 4-379](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-379** Power supply connections of dual DC power modules



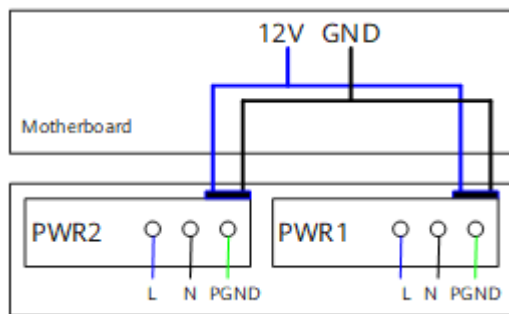
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

**Figure 4-380** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-380** Power supply connections of dual AC power modules



L: Live wire

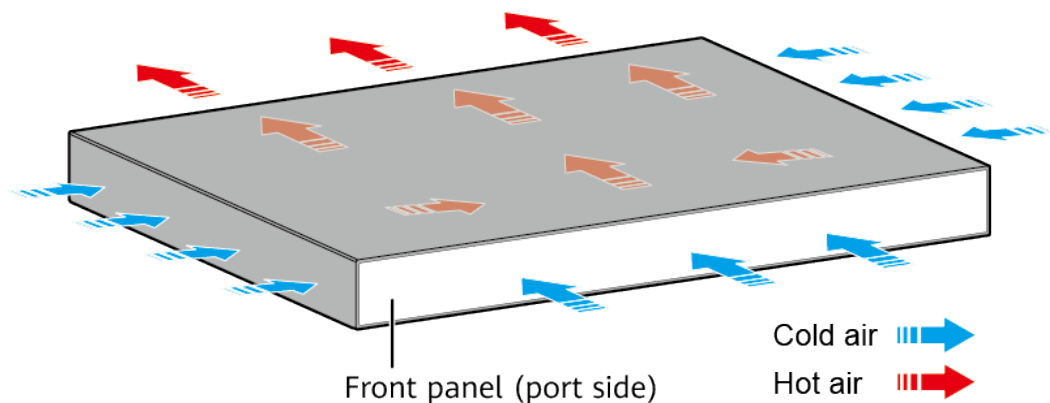
N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

## Heat Dissipation

The S5730S-48C-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-962](#) lists technical specifications of the S5730S-48C-EI-AC.

**Table 4-962** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	47.83 years
Mean time to repair (MTTR)	2 years
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 425.0 mm (1.75 in. x 17.4 in. x 16.73 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.)</li> </ul>
Weight (with packaging)	8.2 kg (18.08 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	62.4 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	39.02 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.

Item	Description
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 59.4 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	98010790

## 4.18.2 S5730S-48C-PWR-EI

### Version Mapping

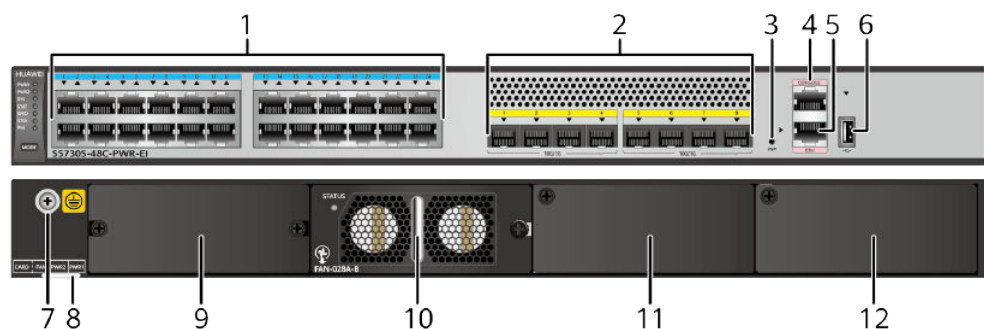
**Table 4-963** lists the mapping between the S5730S-48C-PWR-EI chassis and software versions.

**Table 4-963** Version mapping

Series	Model	Software Version
S5730S-EI	S5730S-48C-PWR-EI	V200R011C10 to V200R019C10 versions

### Appearance and Structure

**Figure 4-381** S5730S-48C-PWR-EI appearance





1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Eight 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <a href="#">GE optical module</a></li> <li>• <a href="#">GE-CWDM optical module</a></li> <li>• <a href="#">GE-DWDM optical module</a></li> <li>• <a href="#">GE copper module (100M/1000M auto-sensing)</a></li> <li>• <a href="#">10GE SFP+ optical module (OSXD22N00 not supported)</a></li> <li>• <a href="#">10GE-CWDM optical module</a></li> <li>• <a href="#">10GE-DWDM optical module</a></li> <li>• <a href="#">1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</a></li> <li>• <a href="#">3 m and 10 m AOC cables</a></li> <li>• <a href="#">0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</a></li> </ul>
3	One PNP button <b>NOTICE</b> Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	4	One console port <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.
5	One ETH management port	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <a href="#">ES5D21Q04Q01</a></li> <li>• <a href="#">ES5D21VST000</a> (applicable in V200R012C00 and later versions)</li> </ul>	10	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">FAN-028A-B</a>

1 1	Power module slot 2  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> </ul>	1 2	Power module slot 1  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> </ul>
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## Interface Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-964](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-964** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-965](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-965** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-966](#).

**Table 4-966** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-967](#) describes the attributes of an ETH management port.

**Table 4-967** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

## USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5730S-48C-PWR-EI has the same types of indicators as the S5730S-68C-PWR-EI. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5730S-48C-PWR-EI is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. [Table 4-968](#) lists its power supply configurations.

**Table 4-968** Power supply configurations

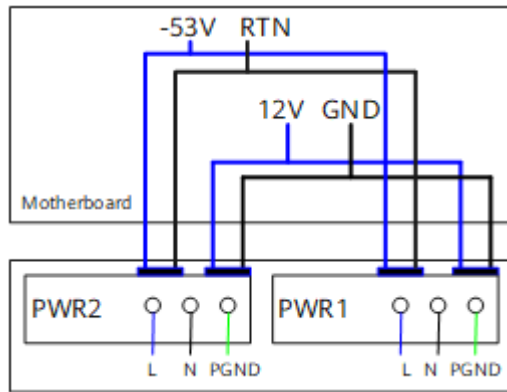
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	–	369.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>

### NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 4-382](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

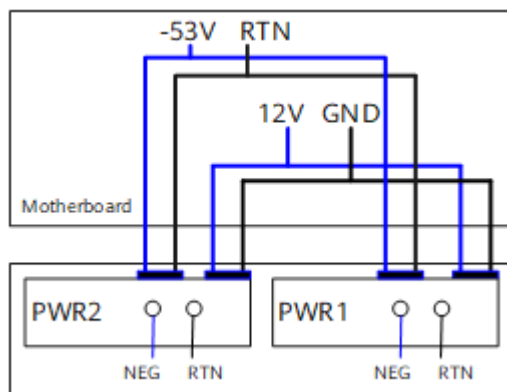
**Figure 4-382** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

**Figure 4-383** shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

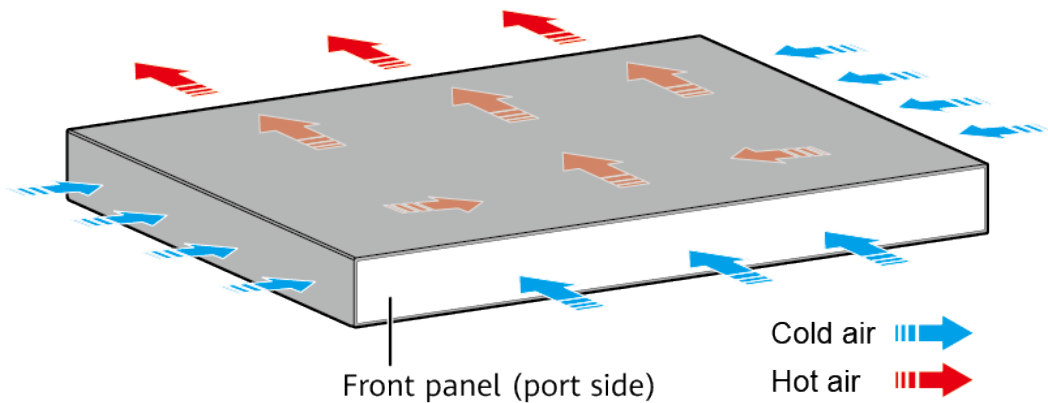
**Figure 4-383** Power supply connections of dual DC PoE power modules



NEG: negative wire      RTN: positive wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5730S-48C-PWR-EI uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-969** lists technical specifications of the S5730S-48C-PWR-EI.

**Table 4-969** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	46.8 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using 500 W AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using 650 W DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 425.0 mm (1.75 in. x 17.4 in. x 16.73 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.)</li> </ul>

Item	Description
Weight (with packaging)	7.5 kg (16.53 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 83.2 W (without card)</li> <li>100% PoE loads: 967 W (system power consumption: 227.8 W, PoE: 739.2 W, without card)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	44.2 W (without card)
Operating temperature	<p>0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.</p>

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.4 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010791

### 4.18.3 S5730S-68C-EI-AC

#### Version Mapping

[Table 4-970](#) lists the mapping between the S5730S-68C-EI-AC chassis and software versions.

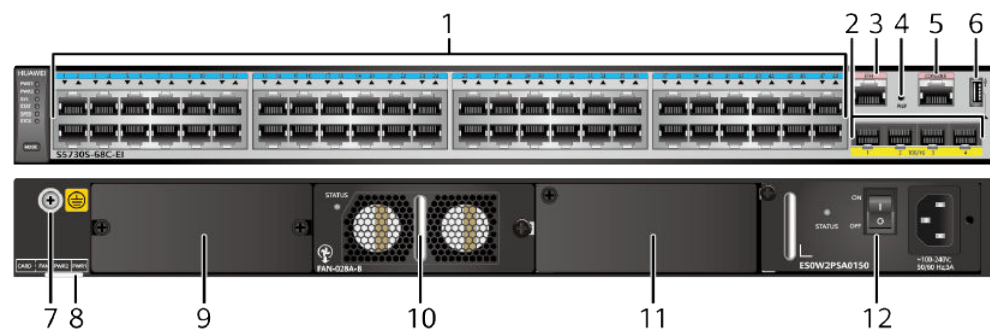


**Table 4-970** Version mapping

Series	Model	Software Version
S5730S-EI	S5730S-68C-EI-AC	V200R011C10 to V200R019C10 versions

## Appearance and Structure

**Figure 4-384** S5730S-68C-EI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
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3	One ETH management port	4	One PNP button <b>NOTICE</b> Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <a href="#">ES5D21Q04Q01</a></li> <li>• <a href="#">ES5D21VST000</a> (applicable in V200R012C00 and later versions)</li> </ul>	10	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">FAN-028A-B</a>
11	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	12	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>

## Interface Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-971](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-971** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-972](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-972** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-973](#).

**Table 4-973** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-974](#) describes the attributes of an ETH management port.

**Table 4-974** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

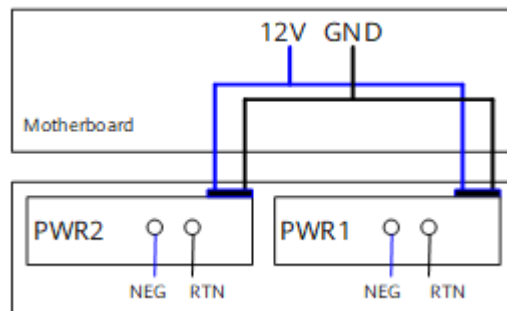
The S5730S-68C-EI-AC has similar indicators to those of the S5730S-68C-PWR-EI except that the S5730S-68C-EI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5730S-68C-EI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 4-385](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-385** Power supply connections of dual DC power modules



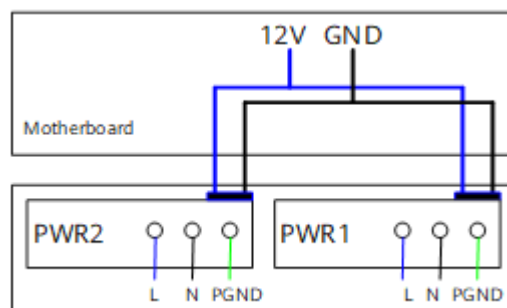
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

[Figure 4-386](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-386** Power supply connections of dual AC power modules



L: Live wire

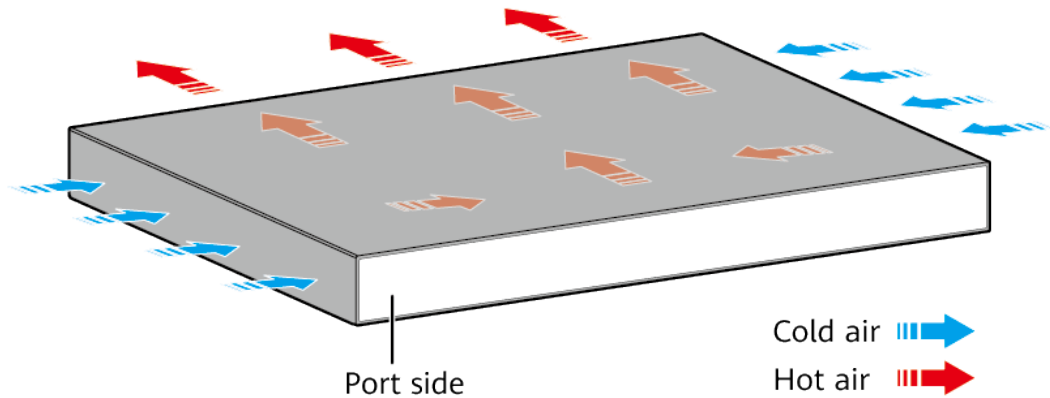
N: Neutral wire

PGND: Protection  
ground wire

GND: 12 V reference  
ground

## Heat Dissipation

The S5730S-68C-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-975](#) lists technical specifications of the S5730S-68C-EI-AC.

**Table 4-975** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	46.53 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>• Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 425.0 mm (1.75 in. x 17.4 in. x 16.73 in.)</li> <li>• Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.)</li> </ul>
Weight (with packaging)	8.5 kg (18.74 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	65.4 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	42.3 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)  <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).  The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010792

## 4.18.4 S5730S-68C-PWR-EI

### Version Mapping

[Table 4-976](#) lists the mapping between the S5730S-68C-PWR-EI chassis and software versions.

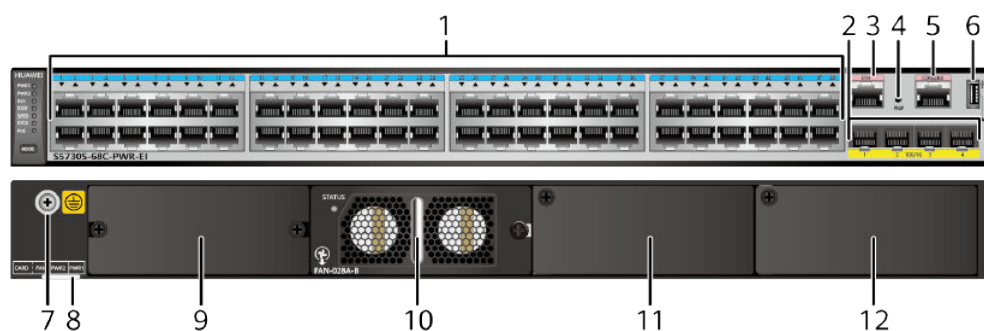


**Table 4-976** Version mapping

Series	Model	Software Version
S5730S-EI	S5730S-68C-PWR-EI	V200R011C10 to V200R019C10 versions

## Appearance and Structure

**Figure 4-387** S5730S-68C-PWR-EI appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
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3	One ETH management port	4	One PNP button <b>NOTICE</b> Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port <b>NOTE</b> It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <a href="#">ES5D21Q04Q01</a></li> <li>• <a href="#">ES5D21VST000</a> (applicable in V200R012C00 and later versions)</li> </ul>	10	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">FAN-028A-B</a>
11	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> <li>• <a href="#">1150 W AC PoE power module</a></li> <li>• <a href="#">1000 W AC PoE power module</a> (applicable in V200R013C00 and later versions)</li> </ul>	12	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE power module</a></li> <li>• <a href="#">650 W DC PoE power module</a></li> <li>• <a href="#">1150 W AC PoE power module</a></li> <li>• <a href="#">1000 W AC PoE power module</a> (applicable in V200R013C00 and later versions)</li> </ul>

## Interface Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-977](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-977** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-978](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-978** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-979](#).

**Table 4-979** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-980](#) describes the attributes of an ETH management port.

**Table 4-980** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

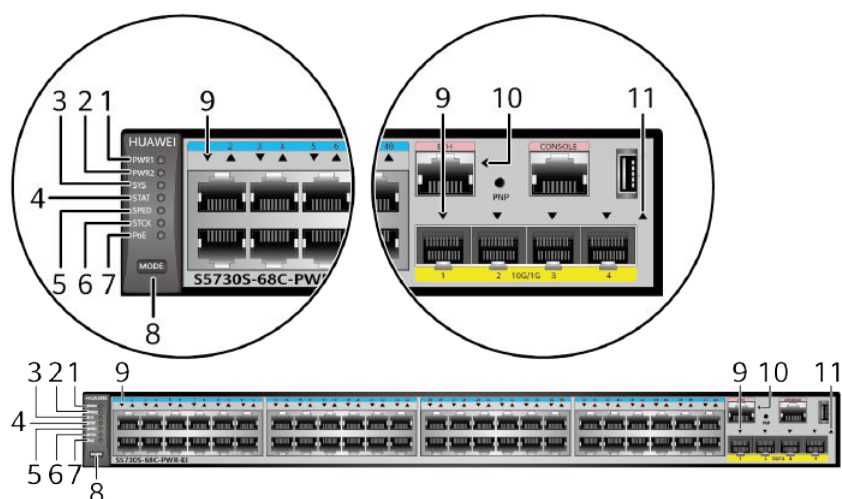
## Indicator Description

### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-388** Indicators on the S5730S-68C-PWR-EI



### NOTE

The S5730S-EI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators of a switch. If the switch fails, its SYS indicator and mode indicators can be configured to blink red fast so that field maintenance personnel can find this faulty switch.

**Table 4-981** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.

No.	Indicator	Name	Color	Status	Description
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator	Name	Color	Status	Description
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-982</a> .		
10	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
11	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>



No.	Indicator	Name	Color	Status	Description
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-982** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.

Display Mode	Color	Status	Description
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> <li>The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.</li> <li>The total power consumption of PDs has reached the maximum power of the switch.</li> <li>The manual power management mode is used and the port is not enabled to provide power to the PD.</li> </ul>
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5730S-68C-PWR-EI is a PoE switch. It has two power module slots, each of which can have a 500 W, 650 W, 1150 W, or 1000 W (applicable in V200R013C00 and later versions) power module installed. A 500 W AC power module and a 650 W DC power module can be used together in the switch. A 1150 W AC power module and a 1000 W AC power module can be used together in the switch.

[Table 4-983](#) lists its power supply configurations.

**Table 4-983** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 24</li> </ul>
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 26</li> </ul>
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 29</li> <li>802.3at (30 W per port): 14</li> </ul>
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 29</li> </ul>
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 25</li> </ul>
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 25</li> </ul>

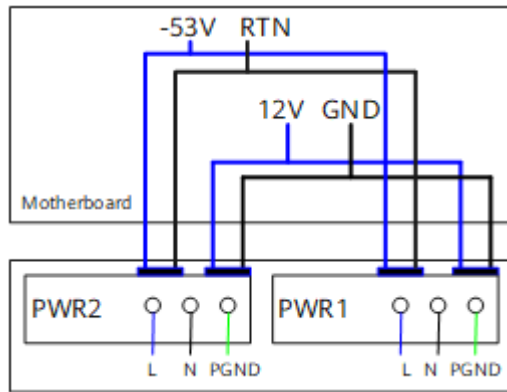
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 48</li> </ul>
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 48</li> </ul>
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 48</li> </ul>
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 29</li> </ul>
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 29</li> </ul>

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

**Figure 4-389** shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

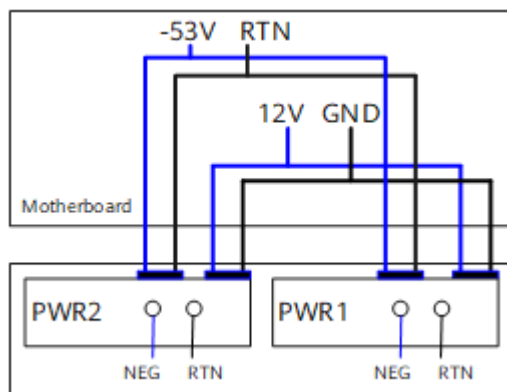
**Figure 4-389** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

**Figure 4-390** shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

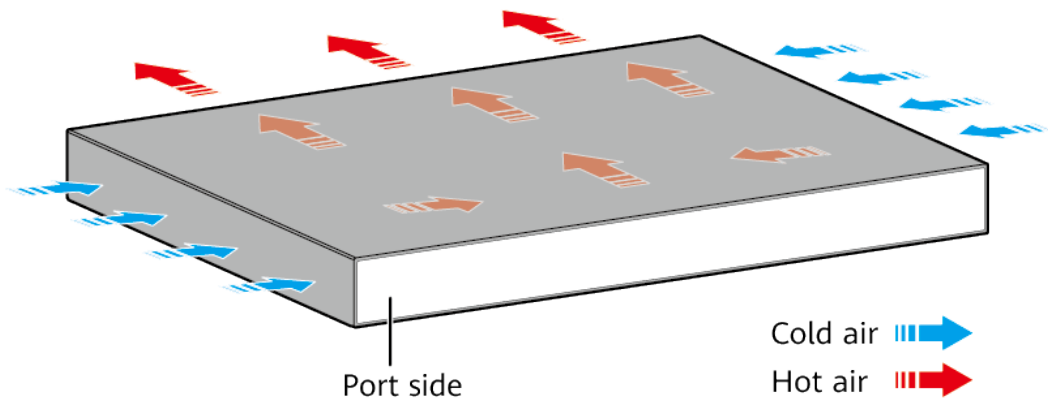
**Figure 4-390** Power supply connections of dual DC PoE power modules



NEG: negative wire      RTN: positive wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5730S-68C-PWR-EI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-984** lists technical specifications of the S5730S-68C-PWR-EI.

**Table 4-984** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	43.28 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using 500 W AC or 1000 W AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using 650 W DC or 1150 W AC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>• Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 425.0 mm (1.75 in. x 17.4 in. x 16.73 in.)</li> <li>• Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.3 mm (1.75 in. x 17.4 in. x 17.77 in.)</li> </ul> <p>When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 541.1 mm (21.3 in.).</p>
Weight (with packaging)	8 kg (17.64 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>• Using 650 W DC or 500 W AC power modules <ul style="list-style-type: none"> <li>- Not providing the PoE function: 68.3 W (without card)</li> <li>- 100% PoE loads: 925 W (system power consumption: 185.8 W, PoE: 739.2 W, without card)</li> </ul> </li> <li>• Using 1150 W AC or 1000 W AC power modules <ul style="list-style-type: none"> <li>- Not providing the PoE function: 68.3 W (without card)</li> <li>- 100% PoE loads: 1733 W (system power consumption: 293 W, PoE: 1440 W, without card)</li> </ul> </li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	50.1 W (without card)

Item	Description
Operating temperature	<p>0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.</p>
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 64.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010793



## 4.19 S5700-HI

### 4.19.1 S5700-28C-HI

#### Version Mapping

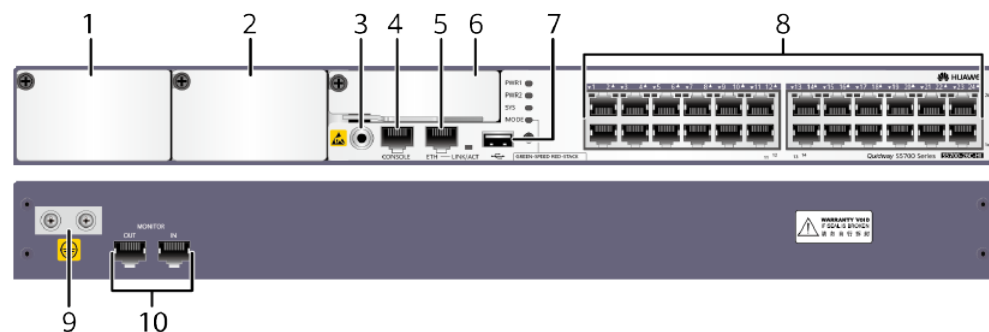
[Table 4-985](#) lists the mapping between the S5700-28C-HI and software versions.

**Table 4-985** Version mapping

Series	Model	Software Version
S5700-HI	S5700-28C-HI	V100R006C01 to V200R005C02 <b>NOTE</b> This model does not match V200R003C02 or V200R003C10.

#### Appearance and Structure

**Figure 4-391** S5700-28C-HI appearance



1	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>5.13 W0PSA1701 (170 W AC Power Module)</li> <li>5.14 ES5M0PSD1700 (170 W DC Power Module)</li> </ul>	2	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>5.13 W0PSA1701 (170 W AC Power Module)</li> <li>5.14 ES5M0PSD1700 (170 W DC Power Module)</li> </ul>
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3	ESD jack <b>NOTE</b> Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	4	One console port
5	One ETH management port	6	Front card slot <b>NOTE</b> Card supported: <ul style="list-style-type: none"> <li>• <a href="#">8.7 ES5D00X2SA00 (2-Port GE SFP/10GE SFP+ Front Optical Interface Card)</a></li> <li>• <a href="#">8.8 ES5D00X4SA00 (4-Port GE SFP/10GE SFP+ Front Optical Interface Card)</a></li> <li>• <a href="#">8.9 ES5D00G4SC00 (4-Port GE SFP Front Optical Interface Card)</a></li> </ul>
7	One USB port	8	Twenty-four 10/100/1000BASE-T ports
9	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> . The switch has two ground screws, any of which can be used to install a ground cable.	10	Monitoring port <b>NOTE</b> The monitoring port monitors the cabinet door, power module, battery power, and power supply of the air conditioner.

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-986](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-986** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-987](#).

**Table 4-987** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 4-988](#) describes the attributes of an ETH management port.

**Table 4-988** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

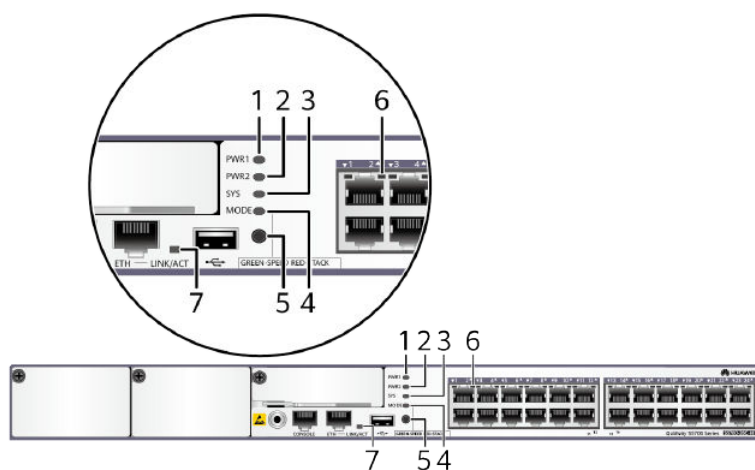
The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

**NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

**Figure 4-392** Indicators on the S5700-28C-HI



**Table 4-989** Description of indicators on the switch

Number	Indicator/Button	Color	Description
1	PWR1: power supply indicator	-	Off: No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 1 and is working normally.

Number	Indicator/Button	Color	Description
		Red	<p>Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 1:</p> <ul style="list-style-type: none"> <li>• A power module is available in this slot but its power switch is in the OFF position.</li> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in power module slot 1 fails.</li> </ul>
2	PWR2: power supply indicator	-	Off: No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 2 and is working normally.
		Red	<p>Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 2:</p> <ul style="list-style-type: none"> <li>• A power module is available in this slot but its power switch is in the OFF position.</li> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in power module slot 2 fails.</li> </ul>
3	SYS: system status indicator	-	Off: The system is not running.

Number	Indicator/ Button	Color	Description
		Green	<p>Indicator states and meaning in V100R006 version:</p> <ul style="list-style-type: none"> <li>Steady on: The system is not operating properly or is starting.</li> <li>Slow blinking: The system is running normally.</li> <li>Fast blinking: The system is copying the system software and configuration file from a USB flash drive during a USB-based upgrade.</li> </ul> <p>Indicator states and meaning in V200R001 and later versions:</p> <ul style="list-style-type: none"> <li>Fast blinking: The system is starting or is copying the system software and configuration file from a USB flash drive during a USB-based upgrade.</li> <li>Slow blinking: The system is running normally.</li> </ul>
		Yellow	<ul style="list-style-type: none"> <li>Steady on: The system is performing self-check during startup (only applicable to V100R006).</li> <li>Blinking: The system has been successfully upgraded using a USB flash drive and the switch has restarted. You can remove the USB flash drive from the switch.</li> </ul>
		Red	<ul style="list-style-type: none"> <li>Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.</li> <li>Blinking: An error occurred during USB-based upgrade and the system failed to be upgraded after a USB flash drive is inserted.</li> </ul>
4	MODE: mode indicator	-	Off: The service port indicators are in the status mode (default). In the status mode, the service port indicator shows the port link or activity state.

Number	Indicator/ Button	Color	Description
		Green	Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
		Red	Steady on: The service port indicators show the stack ID of the switch. After 45 seconds, the service port indicators automatically restore to the status mode.
5	Mode switch button	-	<p>In versions earlier than V200R003C00:</p> <ul style="list-style-type: none"> <li>When you press this button once, the mode indicator turns green and the service port indicators show the speed of each service port.</li> <li>When you press this button a second time, the mode indicator turns off.</li> </ul> <p>In V200R003C00 and later versions:</p> <ul style="list-style-type: none"> <li>When you press this button once, the mode indicator turns green and the service port indicators show the speed of ports.</li> <li>When you press this button a second time, the mode indicator turns red and the service port indicators show stack information.</li> <li>When you press this button a third time, the mode indicator turns off and the service port indicators restore to the status mode.</li> </ul> <p>If you do not press the button within 45 seconds, the mode indicator restores to the default mode.</p>
6	Service port indicator		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-990</a> and <a href="#">Table 4-991</a> .

Number	Indicator/Button	Color	Description
7	ETH indicator	Green	<ul style="list-style-type: none"> <li>Off: No link is established on the port.</li> <li>Steady on: The port is connected.</li> <li>Blinking: The port is sending or receiving data.</li> </ul>

**Table 4-990** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>



Display Mode	Color	Status	Description
	Green	Blinking	<p>The switch is the master switch in a stack.</p> <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

**Table 4-991** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	<p>10M/100M/1000M port: The port is operating at 10/100 Mbit/s.</p> <p>100M/1000M port: The port is operating at 100 Mbit/s.</p>
	Green and yellow	Blinking	<p>10M/100M/1000M port: The port is operating at 1000 Mbit/s.</p> <p>100M/1000M port: The port is operating at 1000 Mbit/s.</p>
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	<p>The switch is not the master switch in a stack.</p> <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>

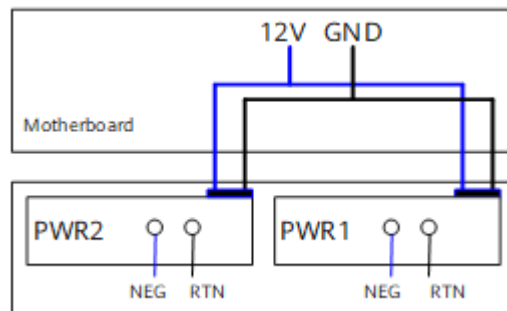
Display Mode	Color	Status	Description
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5700-28C-HI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

**Figure 4-393** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-393** Power supply connections of dual DC power modules



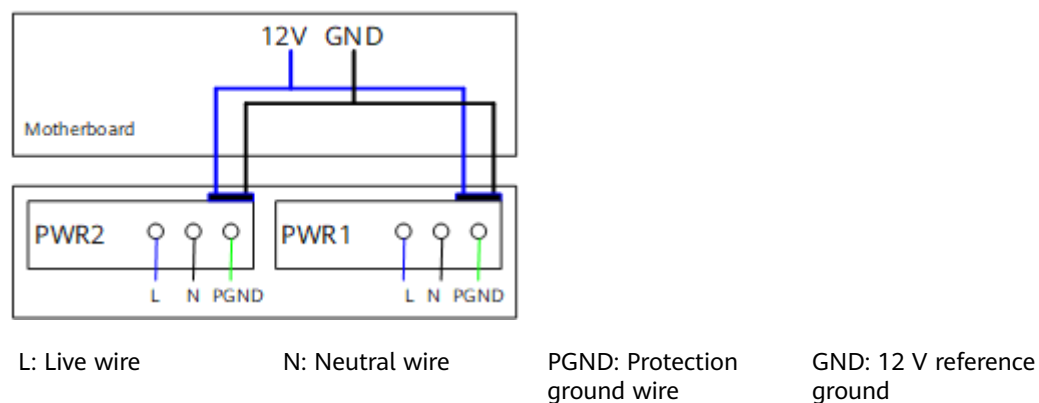
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

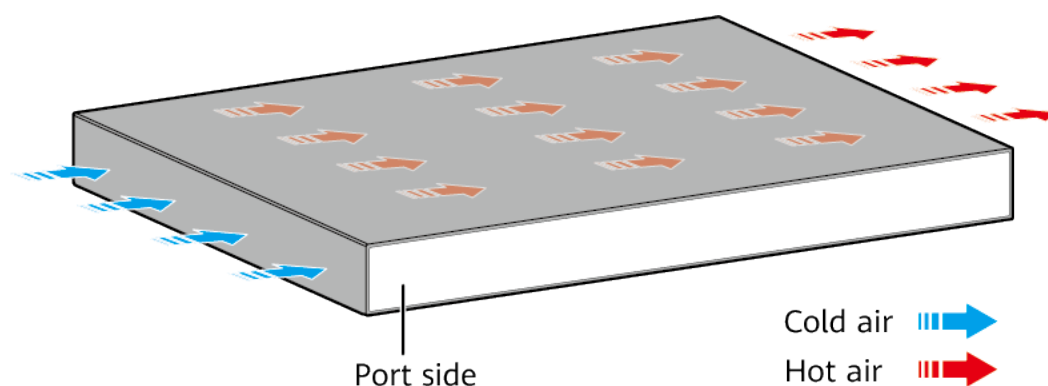
**Figure 4-394** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-394** Power supply connections of dual AC power modules



## Heat Dissipation

The S5700-28C-HI has three built-in fans for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-992** lists technical specifications of the S5700-28C-HI.

**Table 4-992** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	64 MB
Mean time between failures (MTBF)	28.7 years when a 4-port 10GE interface card is configured, 41.1 years when a 2-port 10GE interface card is configured, 42.9 years when a 4-port GE interface card is configured

Item	Description
Mean time to repair (MTTR)	2 years
Availability	> 0.99999
Service port surge protection	±2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: ±6 kV in differential mode, ±6 kV in common mode</li> <li>Using DC power modules: ±1 kV in differential mode, ±2 kV in common mode</li> </ul>
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 220.0 mm (1.75 in. x 17.4 in. x 8.7 in.)
Weight	<ul style="list-style-type: none"> <li>Empty: ≤ 5 kg (11.02 lb)</li> <li>Fully configured: ≤ 6.5 kg (14.33 lb)</li> </ul>
Stack ports	<ul style="list-style-type: none"> <li>Versions earlier than V200R003C00 do not support stack ports.</li> <li>Since V200R003C00, 10GE ports on the front card can be used as stack ports.</li> </ul>
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	76.6 W
Operating temperature	-5°C to +55°C (23°F to 131°F) <b>NOTE</b> The operating temperature of the switch is -5°C to +50°C (23°F to 122°F) when it uses SFP+ optical modules with 40 km or longer transmission distances.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 60 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	02353630

## 4.19.2 S5700-28C-HI-24S

### Version Mapping

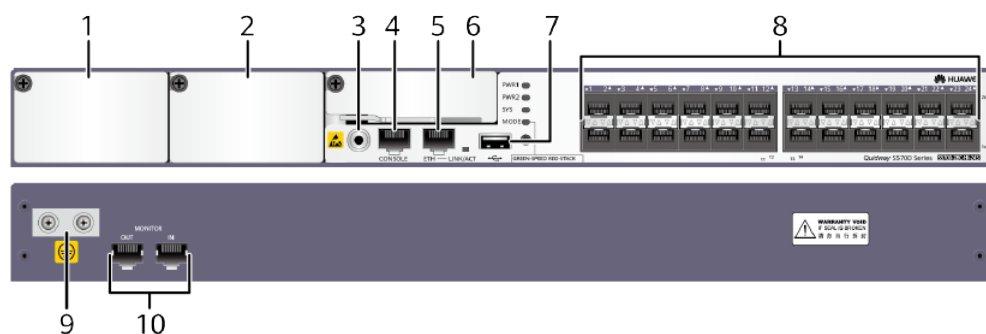
[Table 4-993](#) lists the mapping between the S5700-28C-HI-24S and software versions.

**Table 4-993** Version mapping

Series	Model	Software Version
S5700-HI	S5700-28C-HI-24S	V100R006C01 to V200R005C02 <b>NOTE</b> This model does not match V200R003C02 or V200R003C10.

### Appearance and Structure

**Figure 4-395** S5700-28C-HI-24S appearance



1	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.13 W0PSA1701 (170 W AC Power Module)</a></li> <li>• <a href="#">5.14 ES5M0PSD1700 (170 W DC Power Module)</a></li> </ul>	2	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.13 W0PSA1701 (170 W AC Power Module)</a></li> <li>• <a href="#">5.14 ES5M0PSD1700 (170 W DC Power Module)</a></li> </ul>
3	<p>ESD jack</p> <p><b>NOTE</b> Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.</p>	4	<p>One console port</p>
5	<p>One ETH management port</p>	6	<p>Front card slot</p> <p><b>NOTE</b> Card supported:</p> <ul style="list-style-type: none"> <li>• <a href="#">8.7 ES5D00X2SA00 (2-Port GE SFP/10GE SFP+ Front Optical Interface Card)</a></li> <li>• <a href="#">8.8 ES5D00X4SA00 (4-Port GE SFP/10GE SFP+ Front Optical Interface Card)</a></li> <li>• <a href="#">8.9 ES5D00G4SC00 (4-Port GE SFP Front Optical Interface Card)</a></li> </ul>
7	<p>One USB port</p>	8	<p>Twenty-four 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">FE optical module</a></li> <li>• <a href="#">GE optical module</a></li> <li>• <a href="#">GE-CWDM optical module</a></li> <li>• <a href="#">GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</a></li> </ul>
9	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>. The switch has two ground screws, any of which can be used to install a ground cable.</p>	10	<p>Monitoring port</p> <p><b>NOTE</b> The monitoring port monitors the cabinet door, power module, battery power, and power supply of the air conditioner.</p>

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-994](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-994** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-995](#).

**Table 4-995** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 4-996](#) describes the attributes of an ETH management port.

**Table 4-996** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5700-28C-HI-24S has similar indicators (except service port indicators) to those on the S5700-28C-HI. For details, see [Indicator Description](#).

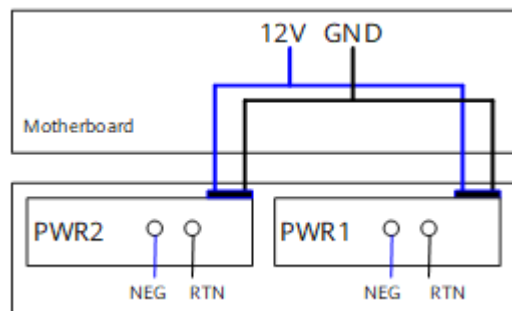
## Power Supply Configuration

The S5700-28C-HI-24S uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 4-396](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.



**Figure 4-396** Power supply connections of dual DC power modules



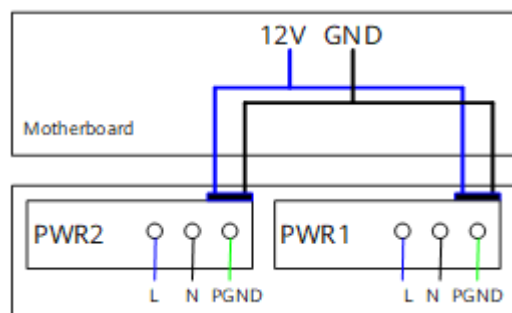
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

**Figure 4-397** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-397** Power supply connections of dual AC power modules



L: Live wire

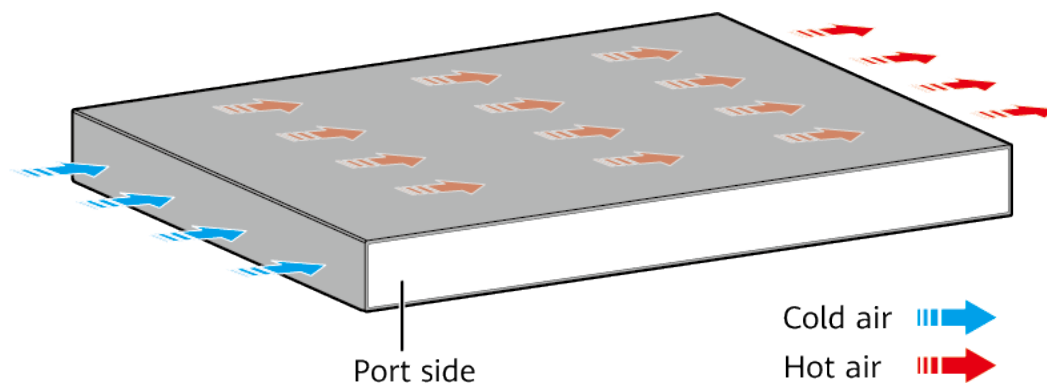
N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

## Heat Dissipation

The S5700-28C-HI-24S has three built-in fans for forced air cooling. The airflow direction is left-to-right.



Cold air

Hot air

 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-997](#) lists technical specifications of the S5700-28C-HI-24S.

**Table 4-997** Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	64 MB
Mean time between failures (MTBF)	25.5 years when a 4-port 10GE interface card is configured, 34.8 years when a 2-port 10GE interface card is configured, 36.1 years when a 4-port GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	NA
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 220.0 mm (1.75 in. x 17.4 in. x 8.7 in.)
Weight	<ul style="list-style-type: none"> <li>Empty: <math>\leq 5</math> kg (11.02 lb)</li> <li>Fully configured: <math>\leq 6.5</math> kg (14.33 lb)</li> </ul>
Stack ports	<ul style="list-style-type: none"> <li>Versions earlier than V200R003C00 do not support stack ports.</li> <li>Since V200R003C00, 10GE ports on the front card can be used as stack ports.</li> </ul>
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	80.7 W
Operating temperature	-5°C to +55°C (23°F to 131°F) <b>NOTE</b> The operating temperature of the switch is -5°C to +50°C (23°F to 122°F) when it uses SFP+ optical modules with 40 km or longer transmission distances.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 60 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"><li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li><li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li></ul>
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02353631

## 4.20 S5710-HI

### 4.20.1 S5710-108C-PWR-HI

#### Version Mapping

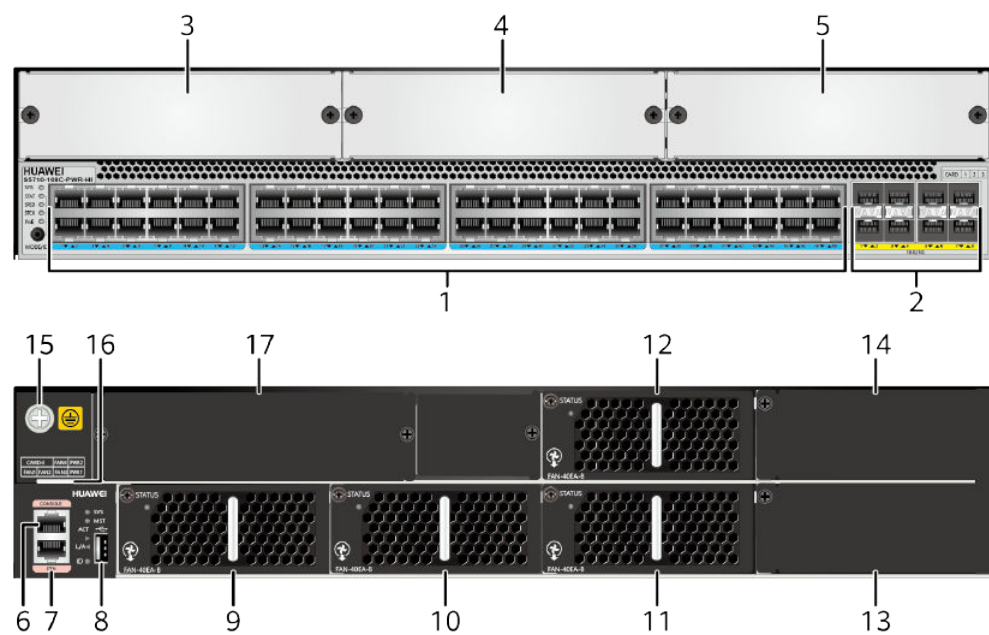
[Table 4-998](#) lists the mapping between the S5710-108C-PWR-HI chassis and software versions.

**Table 4-998** Version mapping

Series	Model	Software Version
S5710-HI	S5710-108C-PWR-HI	V200R003C00 to V200R005C03 <b>NOTE</b> This model does not match V200R003C02, V200R003C10, or V200R005C01.

## Appearance and Structure

**Figure 4-398** S5710-108C-PWR-HI appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Eight 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module (applicable in V200R005C00)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables (applicable in V200R003C00 and later versions)</b></li> </ul>
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3	<p>Front card slot 1</p> <p><b>NOTE</b>  Card supported:</p> <ul style="list-style-type: none"> <li>8.13 ES5D21G16S00 (16-Port GE SFP Front Optical Interface Card)</li> <li>8.14 ES5D21G16T00 (16-Port GE Front Electrical Interface Card)</li> </ul>	4	<p>Front card slot 2</p> <p><b>NOTE</b>  Card supported:</p> <ul style="list-style-type: none"> <li>8.13 ES5D21G16S00 (16-Port GE SFP Front Optical Interface Card)</li> <li>8.14 ES5D21G16T00 (16-Port GE Front Electrical Interface Card)</li> </ul>
5	<p>Front card slot 3</p> <p><b>NOTE</b>  Card supported:</p> <ul style="list-style-type: none"> <li>8.13 ES5D21G16S00 (16-Port GE SFP Front Optical Interface Card)</li> <li>8.14 ES5D21G16T00 (16-Port GE Front Electrical Interface Card)</li> </ul>	6	<p>One console port</p>
7	<p>One ETH management port</p>	8	<p>One USB port</p>
9	<p>Fan slot 1</p> <p><b>NOTE</b>  Applicable fan module: 7.3 FAN-40EA-B Fan Module</p>	10	<p>Fan slot 2</p> <p><b>NOTE</b>  Applicable fan module: 7.3 FAN-40EA-B Fan Module</p>
11	<p>Fan slot 3</p> <p><b>NOTE</b>  Applicable fan module: 7.3 FAN-40EA-B Fan Module</p>	12	<p>Fan slot 4</p> <p><b>NOTE</b>  Applicable fan module: 7.3 FAN-40EA-B Fan Module</p>
13	<p>Power module slot 1</p> <p><b>NOTE</b>  Applicable power modules:</p> <ul style="list-style-type: none"> <li>350 W AC power module</li> <li>1150 W AC PoE power module</li> </ul>	14	<p>Power module slot 2</p> <p><b>NOTE</b>  Applicable power modules:</p> <ul style="list-style-type: none"> <li>350 W AC power module</li> <li>1150 W AC PoE power module</li> </ul>
15	<p>Ground screw</p> <p><b>NOTE</b>  It is used with a <b>ground cable</b>.</p>	16	<p>ESN label</p> <p><b>NOTE</b>  You can draw it out to view the ESN and MAC address of the switch.</p>
17	<p>Rear card slot</p> <p><b>NOTE</b>  Card supported:</p> <ul style="list-style-type: none"> <li>8.18 ES5D21X04S00 (4-Port 10GE SFP+ Rear Optical Interface Card)</li> <li>8.16 ES5D21L04Q00 (4-Port 40GE QSFP+ Optical Interface Card)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-999](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-999** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1000](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1000** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1001](#).

**Table 4-1001** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. **Table 4-1002** describes the attributes of an ETH management port.

**Table 4-1002** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

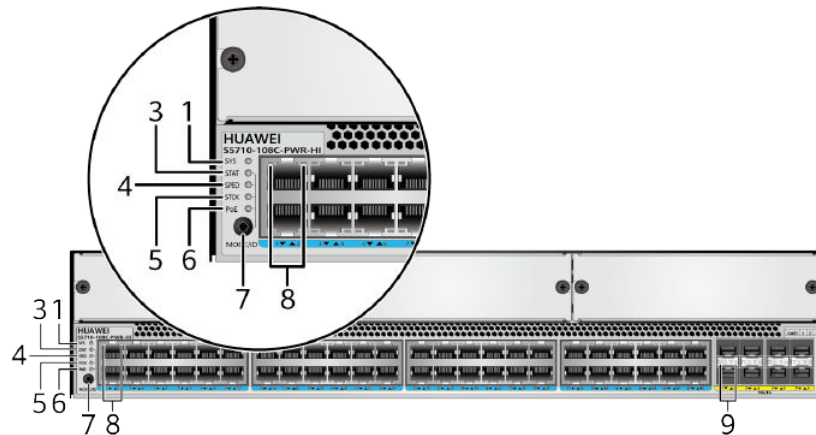
The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

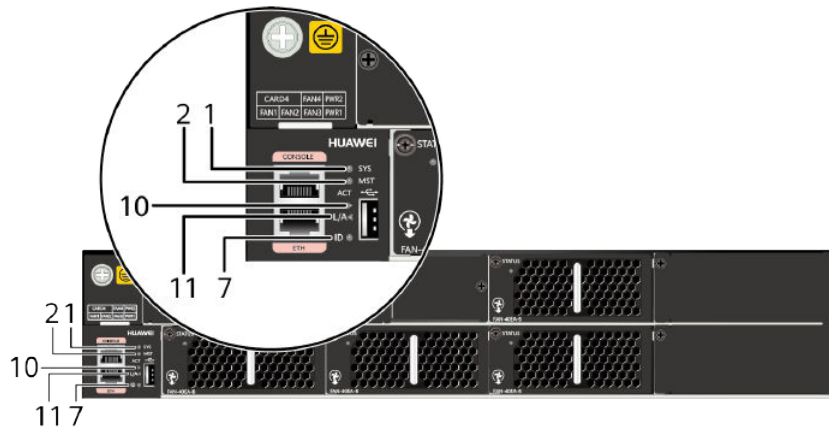
USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

**Figure 4-399** Indicators on the S5710-108C-PWR-HI front panel



**Figure 4-400** Indicators on the S5710-108C-PWR-HI rear panel



**Table 4-1003** Description of indicators on the switch

Number	Indicator	Color	Description
1	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> <li>Fast blinking: The system is starting.</li> <li>Slow blinking: The system is running properly.</li> </ul>



Number	Indicator	Color	Description
		Red	Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.
2	MST: stack master/slave indicator <b>NOTE</b> Versions prior to V200R005C03 do not support the stacking function.	-	Off: The switch is the standby or slave switch in a stack or a standalone switch with the stacking function disabled.
		Green	Steady on: The switch is the master switch in a stack or a standalone switch with the stacking function enabled.
3	STAT: status indicator	Green	<ul style="list-style-type: none"> <li>Off: The status mode is not selected.</li> <li>Steady on: The service port indicators are in the status mode (default).</li> </ul>
4	SPED: speed indicator	Green	<ul style="list-style-type: none"> <li>Off: The speed mode is not selected.</li> <li>Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>
5	STCK: stack indicator <b>NOTE</b> Versions prior to V200R005C03 do not support the stacking function.	Green	If you are not changing the indicator mode (default state): <ul style="list-style-type: none"> <li>Off: The switch is the standby or slave switch in a stack or a standalone switch with the stacking function disabled.</li> <li>Blinking: The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li> </ul>

Number	Indicator	Color	Description
			<p>If you are changing the indicator mode:</p> <ul style="list-style-type: none"><li>• Off: The stack mode is not selected.</li><li>• Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.</li><li>• Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li></ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
6	PoE: PoE indicator	Green	<ul style="list-style-type: none"><li>• Off: The PoE mode is not selected.</li><li>• Steady on: The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.</li></ul>

Number	Indicator	Color	Description
7	MODE: mode switch button	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators change to PoE mode and show the PoE status of ports.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
	ID: ID indicator <b>NOTE</b> The S5710-108C-PWR-HI of V200R003 does not support the ID indicator.	Blue	<ul style="list-style-type: none"> <li>Off: The ID indicator is not used (default state).</li> <li>Steady on: The indicator identifies the device for maintenance. The ID indicator can be turned on or off remotely to help onsite engineers find the device to maintain.</li> </ul>
8	Service port indicator (GE electrical port)	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1004</a> .	
9	Service port indicator (10GE optical port)		

Number	Indicator	Color	Description
10	USB-based deployment indicator: ACT	-	Off: <ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The ACT indicator is damaged.</li> <li>The USB flash drive connected to the switch does not contain any configuration file.</li> <li>The switch is restarting after a USB-based upgrade.</li> </ul>
		Green	<ul style="list-style-type: none"> <li>Steady on: A USB-based deployment has been completed.</li> <li>Blinking: The system is reading data from the USB flash drive.</li> </ul>
		Yellow <b>NOTE</b> This indicator state is available in V200R005C00 and later versions.	Steady on: The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
		Red	Blinking: An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.
11	Management port indicator: L/A	Green	<ul style="list-style-type: none"> <li>Off: No link is established on the management port.</li> <li>Steady on: A link is established on the management port.</li> <li>Blinking: The management port is sending or receiving data.</li> </ul>

**Table 4-1004** Description of service port indicators in different modes

Display Mode	Color	Description
Status	-	Off: No link is established on the port or the port has been shut down.

Display Mode	Color	Description
	Green (electrical port)	<ul style="list-style-type: none"><li>Steady on: A link is established on the port.</li><li>Blinking: The port is sending or receiving data.</li></ul>
	Green (optical port)	Steady on: A link is established on the port.
	Yellow (optical port)	Blinking: The port is sending or receiving data.
Speed	Green	<ul style="list-style-type: none"><li>Off: No link is established on the port or the port has been shut down.</li><li>Steady on:<ul style="list-style-type: none"><li>10M/100M/1000M port: The port is operating at 10/100 Mbit/s.</li><li>1000M/10GE port: The port is operating at 1000 Mbit/s.</li></ul></li><li>Blinking:<ul style="list-style-type: none"><li>10M/100M/1000M port: The port is operating at 1000 Mbit/s.</li><li>1000M/10GE port: The port is operating at 10 Gbit/s.</li></ul></li></ul>
PoE	Green	<ul style="list-style-type: none"><li>Off: The port is not providing power to a powered device (PD).</li><li>Steady on: The port is providing PoE power.</li><li>Blinking: The PD connected to the port is not a standard PD or its power exceeds the maximum power or power threshold of the port.</li></ul>

Display Mode	Color	Description
Stack	Green	<ul style="list-style-type: none"> <li>• Off: Port indicators do not show the stack ID of the switch.</li> <li>• If the indicator is steady on, the switch is not a master switch:                             <ul style="list-style-type: none"> <li>- If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>- If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul> </li> <li>• If the indicator is blinking, the switch is a master switch:                             <ul style="list-style-type: none"> <li>- If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>- If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul> </li> </ul>

## Power Supply Configuration

The S5710-108C-PWR-HI is a PoE switch and uses 1150 W AC PoE power modules. It has two power module slots. [Table 4-1005](#) lists its power supply configurations.

**Table 4-1005** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 26</li> </ul>
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 48</li> </ul>
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 29</li> <li>• 802.3at (30 W per port): 14</li> </ul>

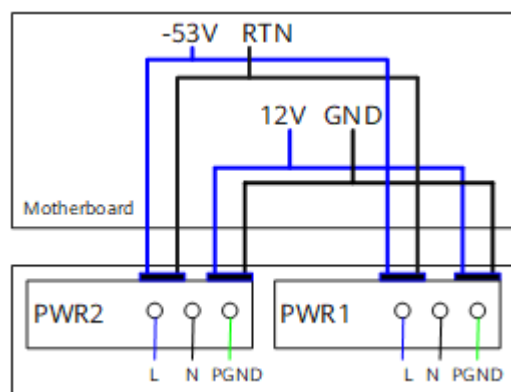
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 29</li> </ul>

**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

**Figure 4-401** shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

**Figure 4-401** Power supply by dual AC PoE power modules

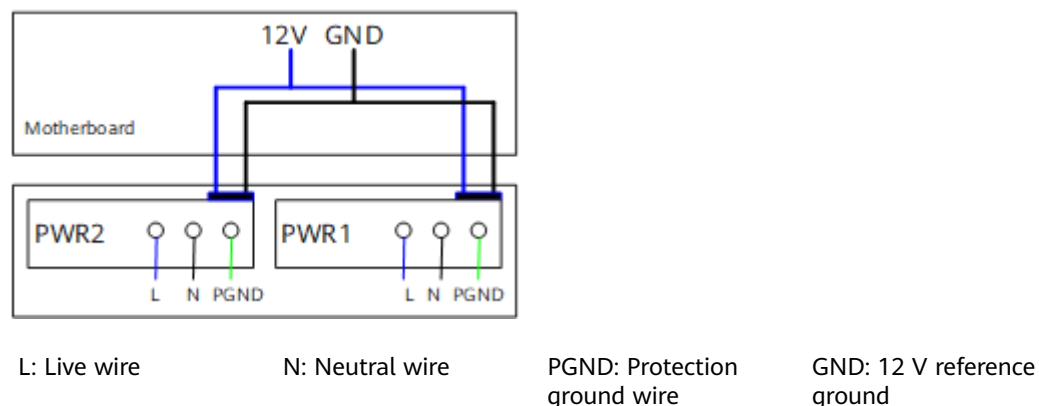


L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

When using non-PoE power modules, the S5710-108C-PWR-HI can be configured with a single power module or double power modules for 1+1 power redundancy. Currently, only one non-PoE power module model, a 350 W AC power module, is supported.

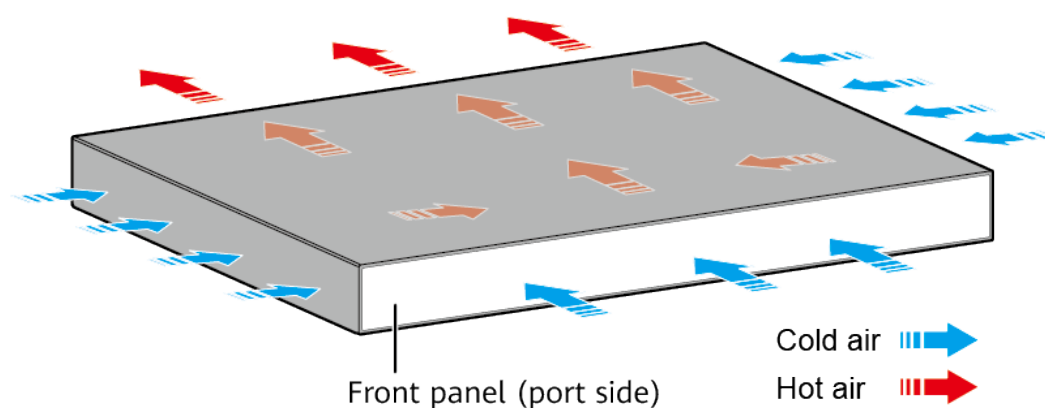
**Figure 4-402** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-402** Power supply connections of dual AC power modules



## Heat Dissipation

The S5710-108C-PWR-HI uses pluggable fan modules for forced air cooling. The airflow direction is front-to-rear.



### NOTE

A little air also enters the chassis from both sides of the chassis.

## Technical Specifications

**Table 4-1006** lists technical specifications of the S5710-108C-PWR-HI.

**Table 4-1006** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	200 MB



Item	Description
Mean time between failures (MTBF)	28.16 years when no interface card is configured, 27 years when a 16-port GE optical card is configured, 25.98 years when a 16-port GE electrical card is configured, 26.95 years when a 4-port 10GE card is configured, 26.69 years when a 4-port 40GE card is configured.
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 1$ kV
Power supply surge protection	$\pm 2$ kV in differential mode, $\pm 4$ kV in common mode
Dimensions (H x W x D)	86.1 mm x 442.0 mm x 470.0 mm (3.4 in. x 17.4 in. x 18.5 in.) When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 557.3 mm (21.94 in.).
Weight	<ul style="list-style-type: none"> <li>Empty: <math>\leq 12</math> kg (26.46 lb)</li> <li>Fully configured: <math>\leq 18</math> kg (39.68 lb)</li> </ul>
Stack ports	<ul style="list-style-type: none"> <li>V200R005C03 and earlier version: not supported</li> <li>V200R005C03: 8-port 10GE SFP+ ports on the front panel</li> </ul>
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	<ul style="list-style-type: none"> <li>Using 350 W power modules: 240 W</li> <li>Using two 1150 W power modules: 1680 W (system power consumption: 240 W, PoE: 1440 W)</li> </ul>
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 67.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02354043

## 4.21 S5720-HI

### NOTE

The S5720-HI switches manufactured after August 31, 2016 cannot be downgraded to V200R007. Use either of the following methods to check the manufacturing date of a switch:

- Run the **display elabel** command in the system view and check the **Manufactured** field.
- Check the manufacturing date on the certificate label attached at the bottom of the switch.

### 4.21.1 S5720-32C-HI-24S-AC

#### Version Mapping

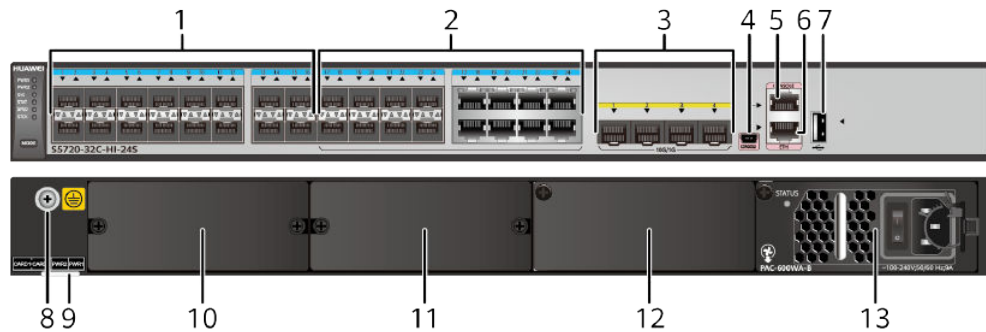
[Table 4-1007](#) lists the mapping between the S5720-32C-HI-24S-AC chassis and software versions.

**Table 4-1007** Version mapping

Series	Model	Software Version
S5720-HI	S5720-32C-HI-24S-AC	V200R006C00 to V200R019C10 versions

## Appearance and Structure

Figure 4-403 S5720-32C-HI-24S-AC appearance



<p>1 Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions)</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>	<p>2 Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions)</b></li> </ul>
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3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>	4	One mini USB port
5	One console port	6	One ETH management port
7	One USB port	8	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .
9	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.	10	Rear card slot 1 <b>NOTE</b> This slot is reserved for future use.
11	Rear card slot 2 <b>NOTE</b> Card supported: <b>8.19 ES5D21X04S01 (4-Port 10 GE SFP+ Rear Interface Card)</b>	12	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <b>5.18 PDC-350WA-B (350 W DC Power Module)</b></li> <li>• <b>5.19 PAC-600WA-B (600 W AC Power Module)</b></li> </ul>

1 3	Power module slot 1  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"><li>• <a href="#">5.18 PDC-350WA-B (350 W DC Power Module)</a></li><li>• <a href="#">5.19 PAC-600WA-B (600 W AC Power Module)</a></li></ul>	-	-
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## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-1008](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-1008** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

**10GE SFP+ port**

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1009](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1009** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

**Console port**

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1010](#).

**Table 4-1010** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1011](#) describes the attributes of an ETH management port.

**Table 4-1011** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

**NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

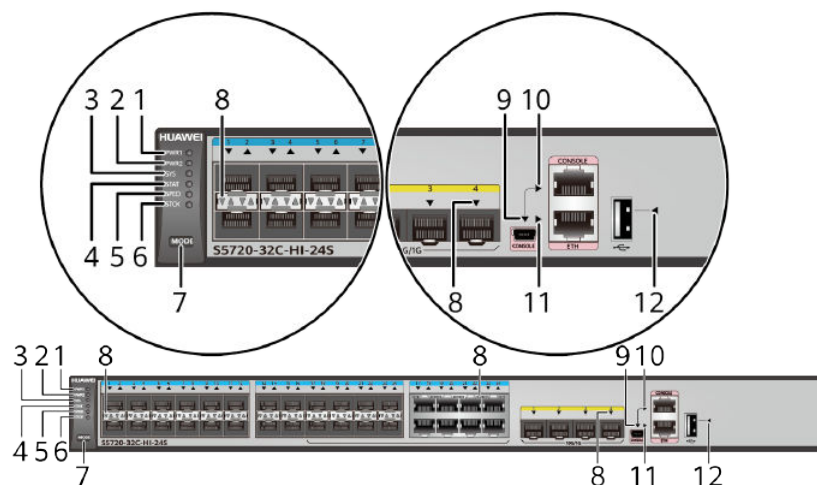
## Indicator Description

**NOTE**

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-404** Indicators on the S5720-32C-HI-24S-AC





**Table 4-1012** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1013</a> and <a href="#">Table 4-1014</a> .		
9	-	Mini USB indicator	-	Off	The Mini USB port is disabled, and the console port is enabled.
			Green	Steady on	The Mini USB port is enabled. When the Mini USB indicator is steady green, the console indicator is off.
10	-	Console indicator	-	Off	The console port is disabled, and the Mini USB port is enabled.
			Green	Steady on	The console port is enabled (default state). When the console indicator is steady green, the Mini USB indicator is off.
11	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.

No.	Indicator	Name	Color	Status	Description
12	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1013** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.

Display Mode	Color	Status	Description
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

**Table 4-1014** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.

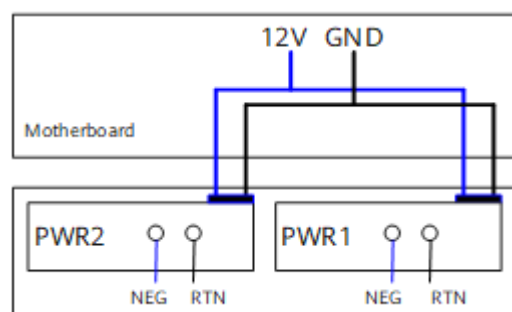
Display Mode	Color	Status	Description
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5720-32C-HI-24S-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

**Figure 4-405** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-405** Power supply connections of dual DC power modules



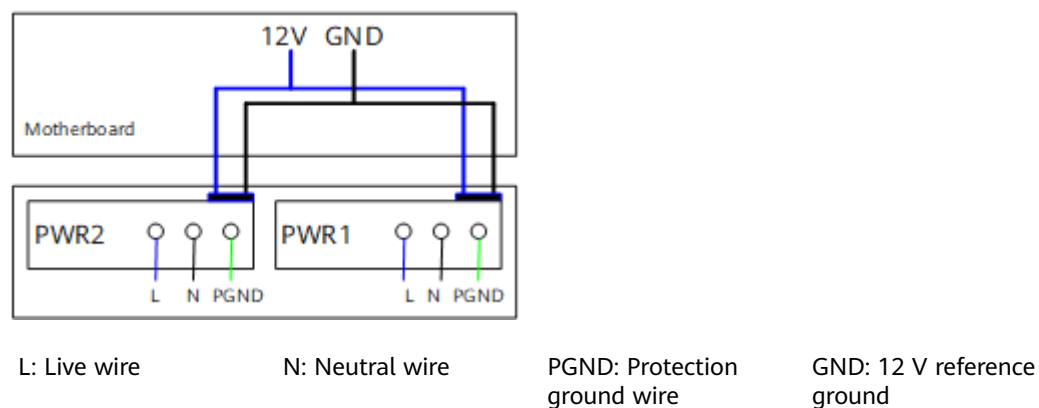
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

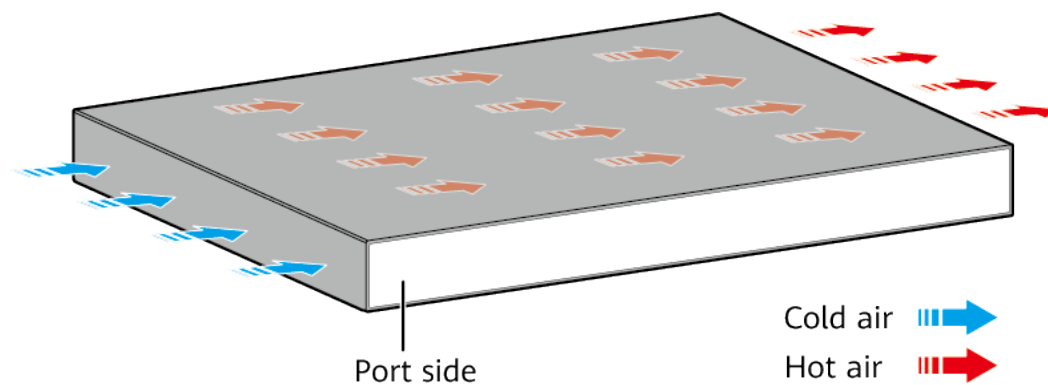
**Figure 4-406** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-406** Power supply connections of dual AC power modules



## Heat Dissipation

The S5720-32C-HI-24S-AC has five built-in fans for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1015** lists technical specifications of the S5720-32C-HI-24S-AC.

**Table 4-1015** Technical specifications

Item	Description
Memory (RAM)	4 GB

Item	Description
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	56.21 years when no interface card is configured, 52.63 years when a 4-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 2$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	10.4 kg (22.93 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 4-port 10GE SFP+ rear interface card <b>NOTE</b> The switch supports service port stacking since V200R009C00.
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	172.7 W



Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	122.12 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 60 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02358600

## 4.21.2 S5720-56C-HI-AC

### Version Mapping

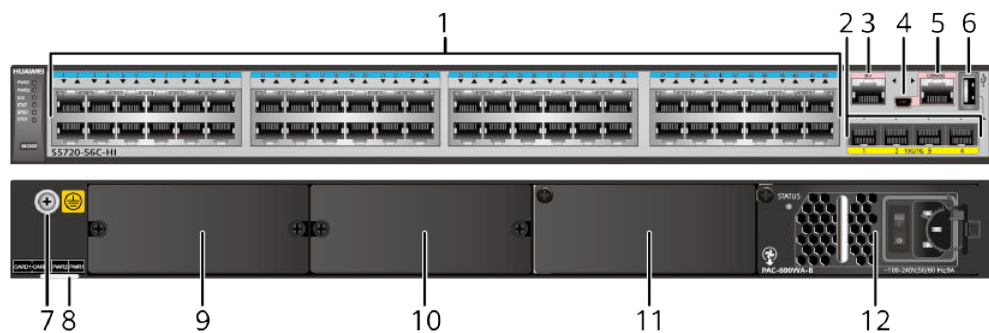
**Table 4-1016** lists the mapping between the S5720-56C-HI-AC chassis and software versions.

**Table 4-1016** Version mapping

Series	Model	Software Version
S5720-HI	S5720-56C-HI-AC	V200R006C00 to V200R019C10 versions

### Appearance and Structure

**Figure 4-407** S5720-56C-HI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>
3	One ETH management port	4	One mini USB port
5	One console port	6	One USB port
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	8	<p>ESN label</p> <p><b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Rear card slot 1</p> <p><b>NOTE</b> This slot is reserved for future use.</p>	10	<p>Rear card slot 2</p> <p><b>NOTE</b> Card supported: <b>8.19 ES5D21X04S01 (4-Port 10 GE SFP+ Rear Interface Card)</b></p>

1 1	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.18 PDC-350WA-B (350 W DC Power Module)</a></li> <li>• <a href="#">5.19 PAC-600WA-B (600 W AC Power Module)</a></li> </ul>	1 2	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.18 PDC-350WA-B (350 W DC Power Module)</a></li> <li>• <a href="#">5.19 PAC-600WA-B (600 W AC Power Module)</a></li> </ul>
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1017](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1017** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1018](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1018** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1019](#).

**Table 4-1019** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1020](#) describes the attributes of an ETH management port.

**Table 4-1020** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see

"First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

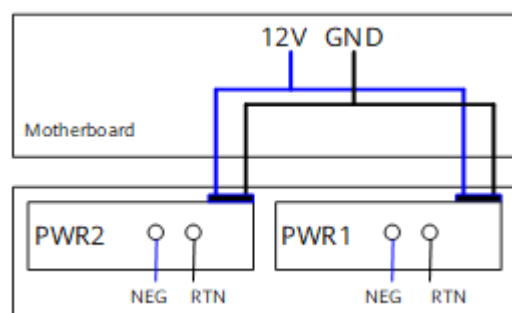
The S5720-56C-HI-AC has similar indicators to S5720-56C-PWR-HI-AC except that the S5720-56C-HI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-56C-HI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 4-408](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-408** Power supply connections of dual DC power modules



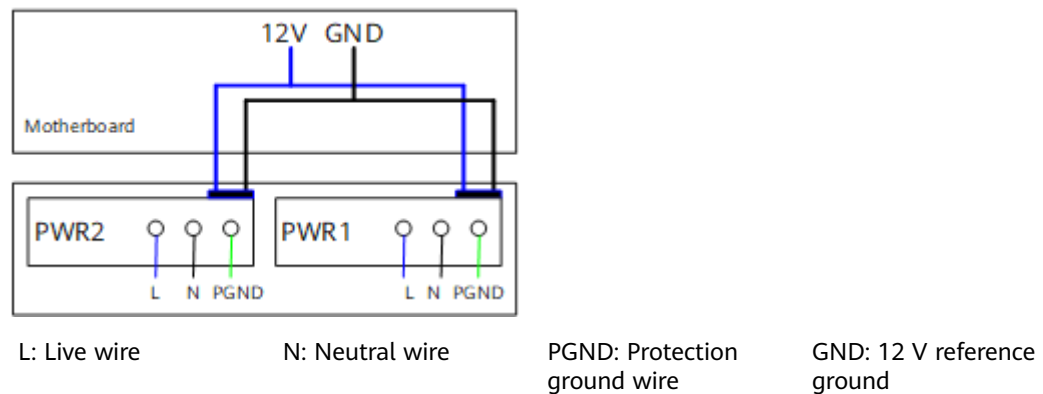
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

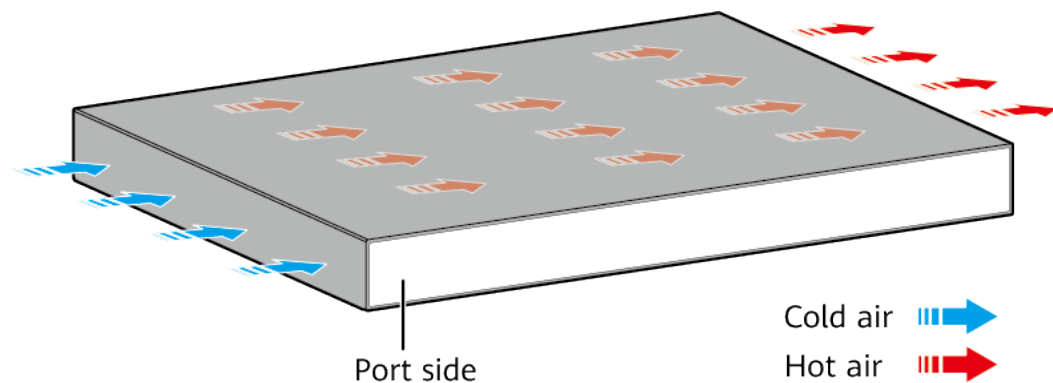
[Figure 4-409](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-409** Power supply connections of dual AC power modules



## Heat Dissipation

The S5720-56C-HI-AC has five built-in fans for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1021** lists technical specifications of the S5720-56C-HI-AC.

**Table 4-1021** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	53.05 years when no interface card is configured, 49.85 years when a 4-port 10GE interface card is configured

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 2$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	10 kg (22.05 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 4-port 10GE SFP+ rear interface card <b>NOTE</b> The switch supports service port stacking since V200R009C00.
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	183.3 W



Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	128.93 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b>                      When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b>                      When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 60.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02358598

### 4.21.3 S5720-56C-PWR-HI-AC

#### Version Mapping

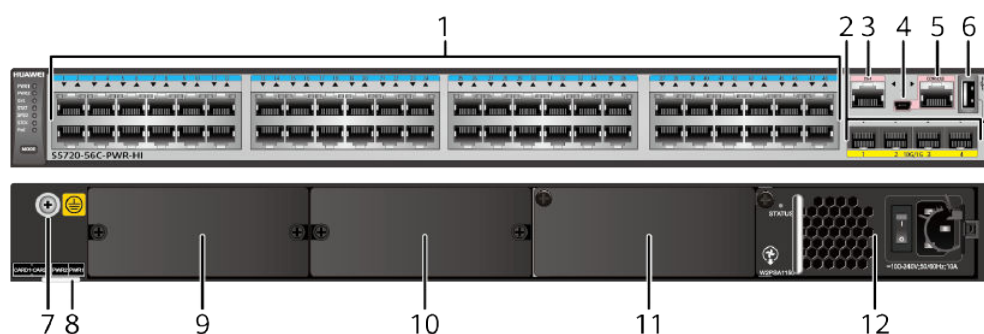
[Table 4-1022](#) lists the mapping between the S5720-56C-PWR-HI-AC chassis and software versions.

**Table 4-1022** Version mapping

Series	Model	Software Version
S5720-HI	S5720-56C-PWR-HI-AC	V200R006C00 to V200R019C10 versions

#### Appearance and Structure

**Figure 4-410** S5720-56C-PWR-HI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>
3	One ETH management port	4	One mini USB port
5	One console port	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	8	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot 1 <b>NOTE</b> This slot is reserved for future use.	10	Rear card slot 2 <b>NOTE</b> Card supported: <b>8.19 ES5D21X04S01 (4-Port 10 GE SFP+ Rear Interface Card)</b>
11	Power module slot 2 <b>NOTE</b> Applicable power module: <b>1150 W AC PoE power module</b>	12	Power module slot 1 <b>NOTE</b> Applicable power module: <b>1150 W AC PoE power module</b>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1023](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1023** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1024](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1024** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1025](#).

**Table 4-1025** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1026](#) describes the attributes of an ETH management port.

**Table 4-1026** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

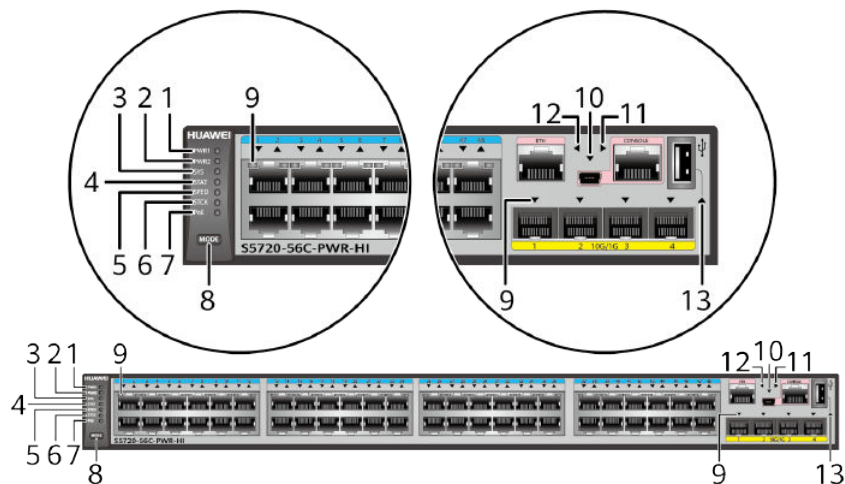
## Indicator Description

#### NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-411 Indicators on the S5720-56C-PWR-HI-AC



**Table 4-1027** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.



No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1028</a> .		
10	-	Mini USB indicator	-	Off	The Mini USB port is disabled, and the console port is enabled.
			Green	Steady on	The Mini USB port is enabled. When the Mini USB indicator is steady green, the console indicator is off.
11	-	Console indicator	-	Off	The console port is disabled, and the Mini USB port is enabled.
			Green	Steady on	The console port is enabled (default state). When the console indicator is steady green, the Mini USB indicator is off.

No.	Indicator	Name	Color	Status	Description
12	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
13	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1028** Description of service port indicators in different modes

Display Mode	Color	Description
Status	Green	<ul style="list-style-type: none"> <li>Off: The port is not connected or has been shut down.</li> <li>Steady on: The port is connected.</li> <li>Blinking: The port is sending or receiving data.</li> </ul>

Display Mode	Color	Description
Speed	Green	<ul style="list-style-type: none"> <li>● Off: The port is not connected or has been shut down.</li> <li>● Steady on:                             <ul style="list-style-type: none"> <li>10M/100M/1000M port: The port is operating at 10/100 Mbit/s.</li> <li>1000M/10GE port: The port is operating at 1000 Mbit/s.</li> </ul> </li> <li>● Blinking:                             <ul style="list-style-type: none"> <li>10M/100M/1000M port: The port is operating at 1000 Mbit/s.</li> <li>1000M/10GE port: The port is operating at 10 Gbit/s.</li> </ul> </li> </ul>
PoE	Green	<ul style="list-style-type: none"> <li>● Off: The port does not provide PoE power.</li> <li>● Steady on: The port is providing PoE power.</li> <li>● Blinking: The PD connected to the port is not a standard PD or its power exceeds the maximum power or power threshold of the port.</li> </ul>
Stack	Green	<ul style="list-style-type: none"> <li>● Off: The STCK mode is not selected.</li> <li>● If the indicator is steady on, the switch is not a master switch:                             <ul style="list-style-type: none"> <li>– If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>– If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul> </li> <li>● If the indicator is blinking, the switch is a master switch:                             <ul style="list-style-type: none"> <li>– If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>– If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul> </li> </ul>

## Power Supply Configuration

The S5720-56C-PWR-HI-AC is a PoE switch and uses 1150 W AC PoE power modules. It has two power module slots. [Table 4-1029](#) lists its power supply configurations.

**Table 4-1029** Power supply configurations

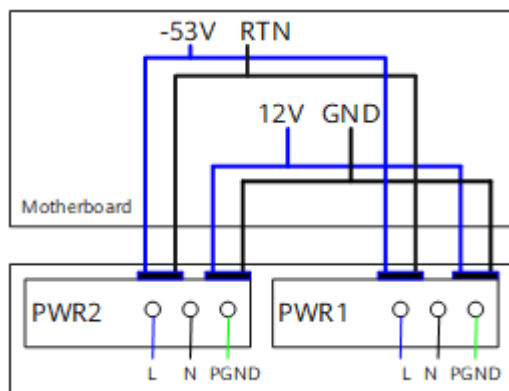
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 48</li><li>• 802.3at (30 W per port): 26</li></ul>
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 48</li><li>• 802.3at (30 W per port): 48</li></ul>
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 29</li><li>• 802.3at (30 W per port): 14</li></ul>
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 48</li><li>• 802.3at (30 W per port): 29</li></ul>

### NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 4-412](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

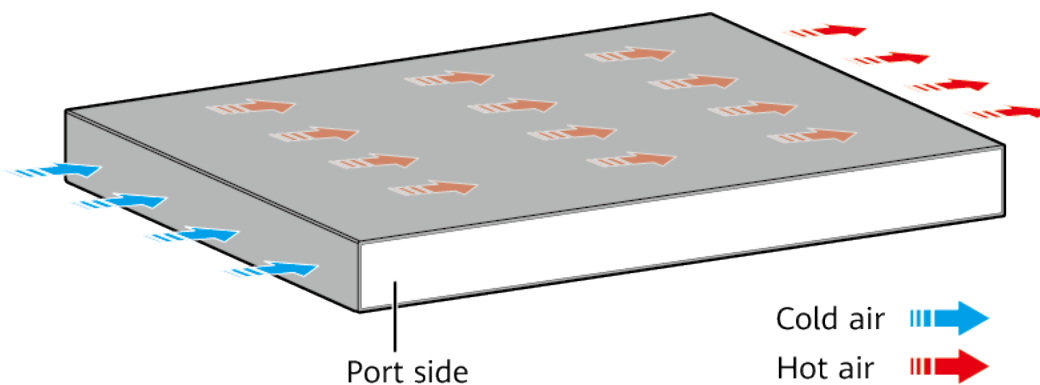
**Figure 4-412** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5720-56C-PWR-HI-AC has five built-in fans for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1030** lists technical specifications of the S5720-56C-PWR-HI-AC.

**Table 4-1030** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.

Item	Description
Mean time between failures (MTBF)	39.31 years when no interface card is configured; 37.53 years when a 4-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 1$ kV
Power supply surge protection	$\pm 2$ kV in differential mode, $\pm 4$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 510.5 mm (1.75 in. x 17.4 in. x 20.1 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 541.1 mm (1.75 in. x 17.4 in. x 21.3 in.)</li> </ul>
Weight (with packaging)	10.9 kg (24.03 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 4-port 10GE SFP+ rear interface card <b>NOTE</b> The switch supports service port stacking since V200R009C00.
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	1739 W (system power consumption: 299 W, PoE: 1440 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	132.35 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b>                      When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b>                      When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 69.8 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02358599

## 4.21.4 S5720-56C-PWR-HI-AC1

### Version Mapping

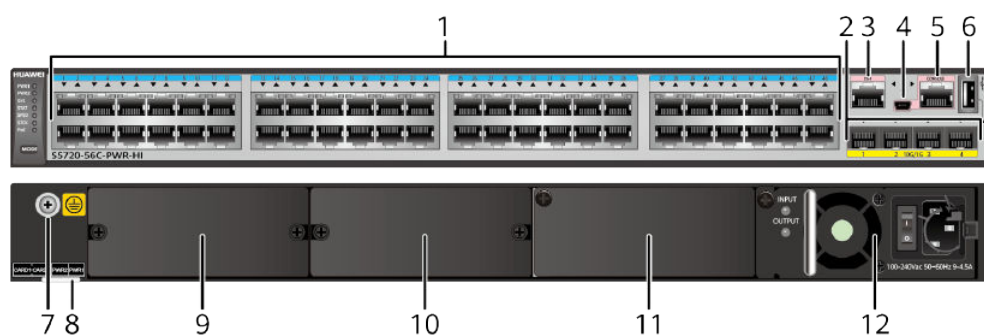
**Table 4-1031** lists the mapping between the S5720-56C-PWR-HI-AC1 chassis and software versions.

**Table 4-1031** Version mapping

Series	Model	Software Version
S5720-HI	S5720-56C-PWR-HI-AC1	V200R009C00 to V200R019C10 versions

### Appearance and Structure

**Figure 4-413** S5720-56C-PWR-HI-AC1 appearance





1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module (applicable in V200R009C00 and later versions)</b></li> <li>• <b>1 m, 3 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)</b></li> </ul>
3	One ETH management port	4	One mini USB port
5	One console port	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	8	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot 1 <b>NOTE</b> This slot is reserved for future use.	10	Rear card slot 2 <b>NOTE</b> Card supported: <b>8.19 ES5D21X04S01 (4-Port 10 GE SFP+ Rear Interface Card)</b>
11	Power module slot 2 <b>NOTE</b> Applicable power module: <b>580 W AC PoE power module</b>	12	Power module slot 1 <b>NOTE</b> Applicable power module: <b>580 W AC PoE power module</b>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1032](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1032** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1033](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1033** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1034](#).

**Table 4-1034** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1035](#) describes the attributes of an ETH management port.

**Table 4-1035** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

## USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5720-56C-PWR-HI-AC1 has the same types of indicators as the S5720-56C-PWR-HI-AC. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5720-56C-PWR-HI-AC1 is a PoE switch and uses 580 W AC PoE power modules. It has two power module slots. [Table 4-1036](#) lists its power supply configurations.

**Table 4-1036** Power supply configurations

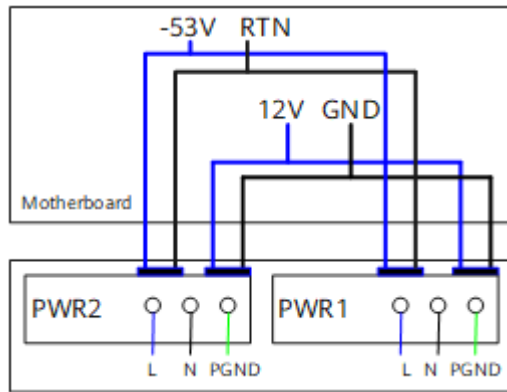
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
580 W	-	369.6 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 24</li><li>802.3at (30 W per port): 12</li></ul>
580 W	580 W	739.2 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 48</li><li>802.3at (30 W per port): 24</li></ul>

### NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 4-414](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

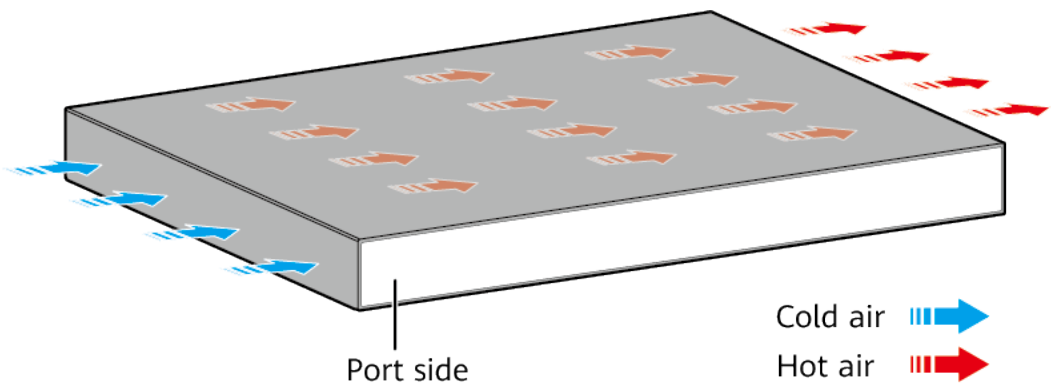
**Figure 4-414** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5720-56C-PWR-HI-AC1 has five built-in fans for forced air cooling. The airflow direction is left-to-right.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1037** lists technical specifications of the S5720-56C-PWR-HI-AC1.

**Table 4-1037** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.

Item	Description
Mean time between failures (MTBF)	39.31 years when no interface card is configured; 37.53 years when a 4-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 1$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	10.6 kg (23.37 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 4-port 10GE SFP+ rear interface card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	Not providing the PoE function: 188.74 W 100% PoE loads: 1036 W (system power consumption: 296 W, PoE: 740 W)

Item	Description
<p>Typical power consumption (30% of traffic load)</p> <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	<p>137.8 W</p>
<p>Operating temperature</p>	<p>0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b>  When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
<p>Short-term operating temperature</p>	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b>  When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
<p>Storage temperature</p>	<p>-40°C to +70°C (-40°F to +158°F)</p>
<p>Noise under normal temperature (27°C, sound power)</p>	<p>&lt; 64.6 dB(A)</p>
<p>Relative humidity</p>	<p>5% to 95%, noncondensing</p>
<p>Operating altitude</p>	<p>0-5000 m (0-16404 ft.)</p>

Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02350MTQ

## 4.22 S5730-HI

### 4.22.1 S5730-36C-HI

#### Version Mapping

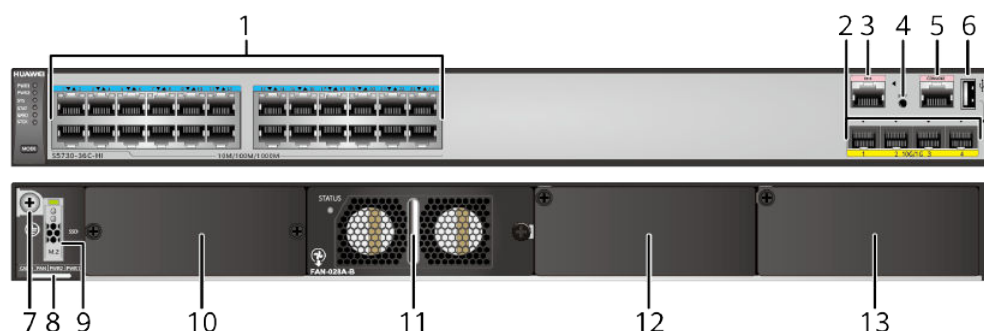
[Table 4-1038](#) lists the mapping between the S5730-36C-HI chassis and software versions.

**Table 4-1038** Version mapping

Series	Model	Software Version
S5730-HI	S5730-36C-HI	V200R012C00 to V200R019C10 versions

#### Appearance and Structure

**Figure 4-415** S5730-36C-HI appearance





1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One ETH management port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	8	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
9	SSD card slot <b>NOTE</b> Pluggable SSD card supported: <b>SSD-240GB</b>	10	Rear card slot <b>NOTE</b> Cards supported: <ul style="list-style-type: none"> <li>• <b>ES5D21Q02Q00</b></li> <li>• <b>ES5D21X08T00</b></li> <li>• <b>ES5D21X08S00</b></li> </ul>

1 1	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">FAN-028A-B</a>	1 2	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>
1 3	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1039](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1039** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1040](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1040** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1041](#).

**Table 4-1041** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1042](#) describes the attributes of an ETH management port.

**Table 4-1042** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

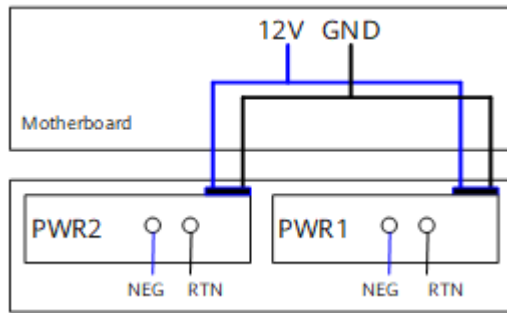
The S5730-36C-HI has similar indicators to those of the S5730-44C-PWH-HI except that the S5730-36C-HI does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5730-36C-HI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

**Figure 4-416** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-416** Power supply connections of dual DC power modules



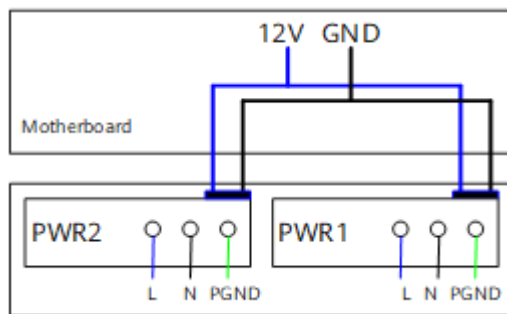
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

**Figure 4-417** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-417** Power supply connections of dual AC power modules



L: Live wire

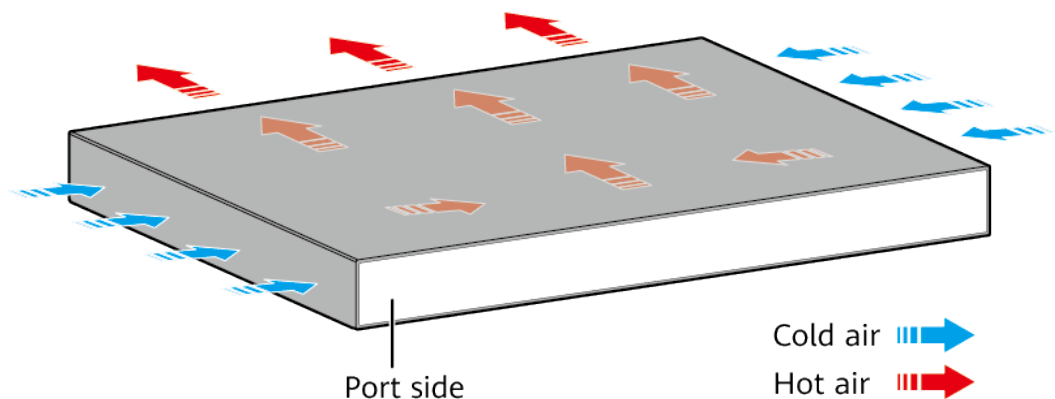
N: Neutral wire


PGND: Protection ground wire

GND: 12 V reference ground

## Heat Dissipation

The S5730-36C-HI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



Cold air   
 Hot air 

 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1043** lists technical specifications of the S5730-36C-HI.

**Table 4-1043** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	47.53 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	8.6 kg (18.96 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	74 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	58 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 52.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02351MQJ

## 4.22.2 S5730-36C-PWH-HI

## Version Mapping

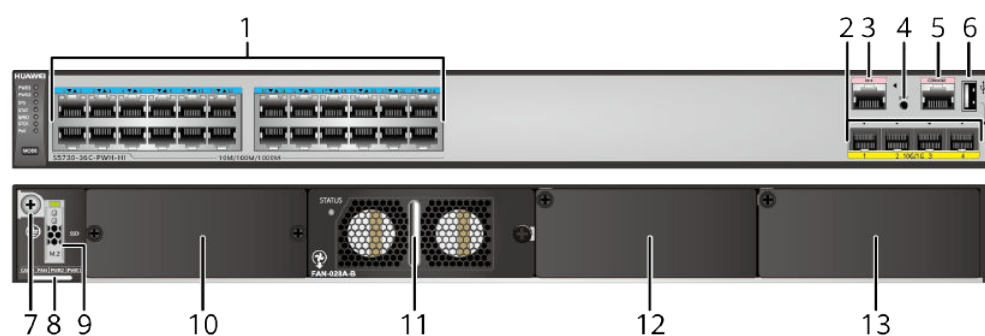
**Table 4-1044** lists the mapping between the S5730-36C-PWH-HI chassis and software versions.

**Table 4-1044** Version mapping

Series	Model	Software Version
S5730-HI	S5730-36C-PWH-HI	V200R012C00 to V200R019C10 versions

## Appearance and Structure

**Figure 4-418** S5730-36C-PWH-HI appearance



1	Twenty-four PoE+ + 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
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3	One ETH management port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
9	SSD card slot <b>NOTE</b> Pluggable SSD card supported: <a href="#">SSD-240GB</a>	10	Rear card slot <b>NOTE</b> Cards supported: <ul style="list-style-type: none"> <li>• <a href="#">ES5D21Q02Q00</a></li> <li>• <a href="#">ES5D21X08T00</a></li> <li>• <a href="#">ES5D21X08S00</a></li> </ul>
11	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">FAN-028A-B</a>	12	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE Power Module</a></li> <li>• <a href="#">650 W DC PoE Power Module</a></li> <li>• <a href="#">1150 W AC PoE Power Module</a></li> <li>• <a href="#">1000 W AC PoE power module</a> (applicable in V200R013C00 and later versions)</li> </ul>
13	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE Power Module</a></li> <li>• <a href="#">650 W DC PoE Power Module</a></li> <li>• <a href="#">1150 W AC PoE Power Module</a></li> <li>• <a href="#">1000 W AC PoE power module</a> (applicable in V200R013C00 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1045](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1045** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1046](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1046** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1047](#).

**Table 4-1047** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1048](#) describes the attributes of an ETH management port.

**Table 4-1048** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5730-36C-PWH-HI has the same types of indicators as the S5730-44C-PWH-HI. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5730-36C-PWH-HI is a PoE switch. It has two power module slots, each of which can have a 500 W, 650 W, 1150 W, or 1000 W (applicable in V200R013C00 and later versions) power module installed. A 500 W AC power module and a 650 W DC power module can be used together in the switch. A 1150 W AC power module and a 1000 W AC power module can be used together in the switch.

[Table 4-1049](#) lists its power supply configurations.

**Table 4-1049** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 24</li><li>802.3at (30 W per port): 12</li><li>802.3bt (60 W per port): 6</li></ul>
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 24</li><li>802.3at (30 W per port): 24</li><li>802.3bt (60 W per port): 12</li></ul>
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 24</li><li>802.3at (30 W per port): 24</li><li>802.3bt (60 W per port): 13</li></ul>

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 24</li> </ul>
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 14</li> <li>• 802.3bt (60 W per port): 7</li> </ul>
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 14</li> </ul>
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 12</li> </ul>
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 24</li> </ul>
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 12</li> </ul>

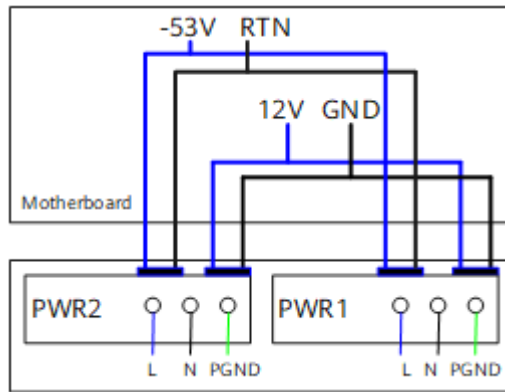
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 24</li> </ul>
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 24</li> </ul>
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 24</li> </ul>
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 14</li> </ul>
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 14</li> </ul>

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

**Figure 4-419** shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

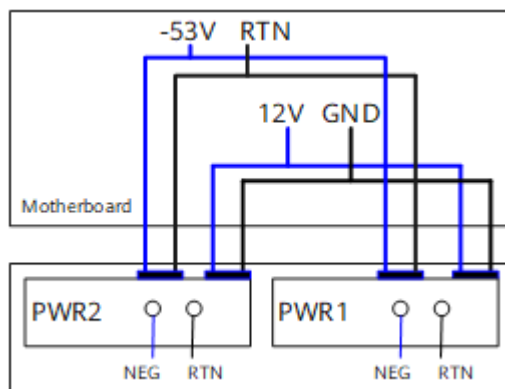
**Figure 4-419** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

**Figure 4-420** shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

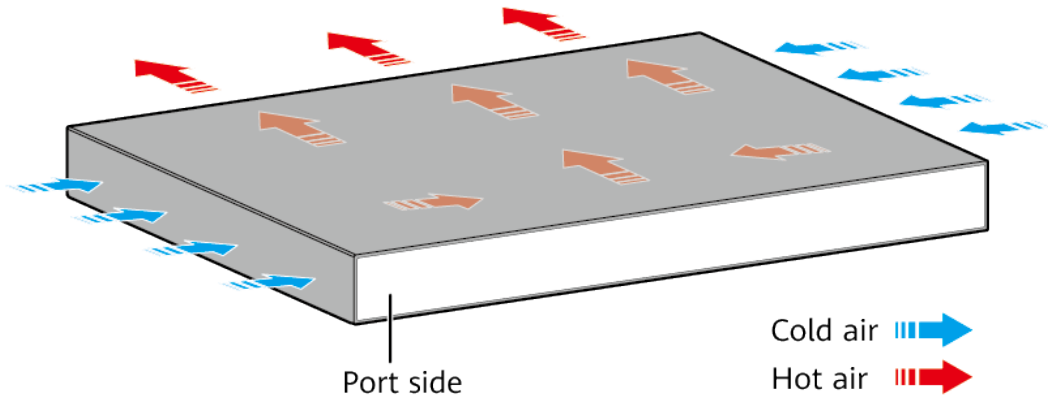
**Figure 4-420** Power supply connections of dual DC PoE power modules



NEG: negative wire      RTN: positive wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5730-36C-PWH-HI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1050** lists technical specifications of the S5730-36C-PWH-HI.

**Table 4-1050** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	53.93 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using 500 W AC or 1000 W AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using 650 W DC or 1150 W AC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>



Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>• Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>• Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul> <p>When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 541.1 mm (21.3 in.).</p>
Weight (with packaging)	8.8 kg (19.40 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>• Using 650 W DC or 500 W AC power modules: <ul style="list-style-type: none"> <li>- Not providing the PoE function: 90 W (without card)</li> <li>- 100% PoE loads: 815 W (system power consumption: 75.8 W, PoE: 739.2 W, without card)</li> </ul> </li> <li>• Using 1150 W AC or 1000 W AC power modules: <ul style="list-style-type: none"> <li>- Not providing the PoE function: 105.9 W (without card)</li> <li>- 100% PoE loads: 1595 W (system power consumption: 155 W, PoE: 1440 W, without card)</li> </ul> </li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	Using 650 W DC or 500 W AC power modules: 66 W (without card) Using 1150 W AC or 1000 W AC power modules: 73 W (without card)

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 69 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02351MQN

### 4.22.3 S5730-36C-HI-24S

#### Version Mapping

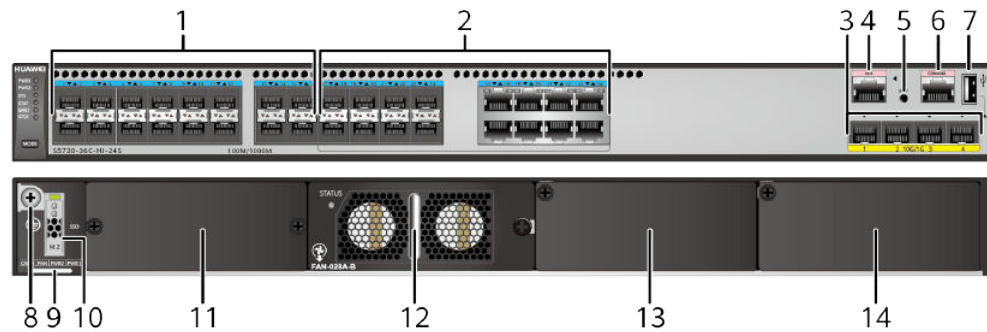
**Table 4-1051** lists the mapping between the S5730-36C-HI-24S chassis and software versions.

**Table 4-1051** Version mapping

Series	Model	Software Version
S5730-HI	S5730-36C-HI-24S	V200R013C00 to V200R019C10 versions

## Appearance and Structure

Figure 4-421 S5730-36C-HI-24S appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario)</b></li> </ul>	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario)</b></li> </ul>
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>	4	<p>One ETH management port</p>

5	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>One console port</p>
7	<p>One USB port</p>	8	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <a href="#">ground cable</a>.</p>
9	<p>ESN label</p> <p><b>NOTE</b></p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>	10	<p>SSD card slot</p> <p><b>NOTE</b></p> <p>Pluggable SSD card supported: <a href="#">SSD-240GB</a></p>
11	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Cards supported:</p> <ul style="list-style-type: none"> <li>• <a href="#">ES5D21Q02Q00</a></li> <li>• <a href="#">ES5D21X08T00</a></li> <li>• <a href="#">ES5D21X08S00</a></li> </ul>	12	<p>Fan slot</p> <p><b>NOTE</b></p> <p>Applicable fan module: <a href="#">FAN-028A-B</a></p>
13	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	14	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-1052](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-1052** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1053](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1053** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1054](#).

**Table 4-1054** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1055](#) describes the attributes of an ETH management port.

**Table 4-1055** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

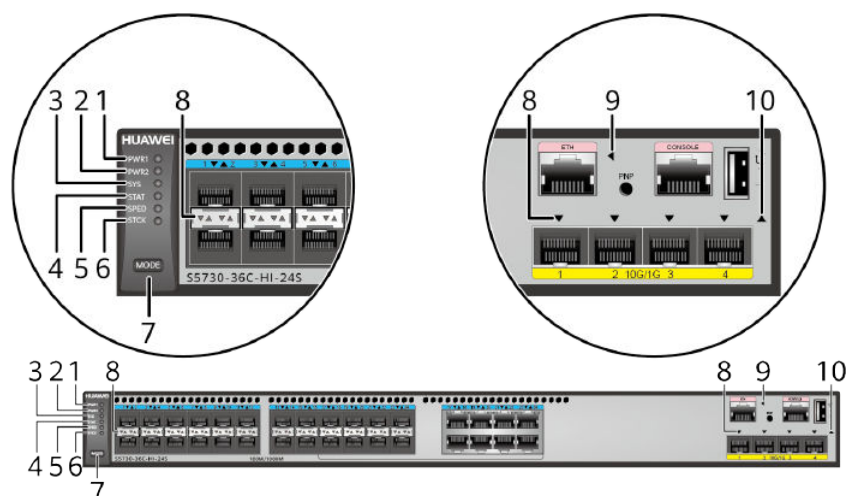
## Indicator Description

#### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-422 Indicators on the S5730-36C-HI-24S



 **NOTE**

The S5730-HI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, and STCK) are used as fault indicators. When an S5730-HI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

**Table 4-1056** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.



No.	Indicator	Name	Color	Status	Description
			Yellow	Steady on	<p>The switch has two power modules installed. Any of the following situations occurs in power module slot 2:</p> <ul style="list-style-type: none"> <li>• A power module is available in this slot but its power switch is in the OFF position.</li> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	In the system startup preparation phase, the SYS indicator is steady green for no more than 15 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>• If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>• If you are changing the indicator mode: The stack mode is not selected.</li> </ul>

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1057</a> and <a href="#">Table 4-1058</a> .		
9	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.

No.	Indicator	Name	Color	Status	Description
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1057** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.

Display Mode	Color	Status	Description
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

**Table 4-1058** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.

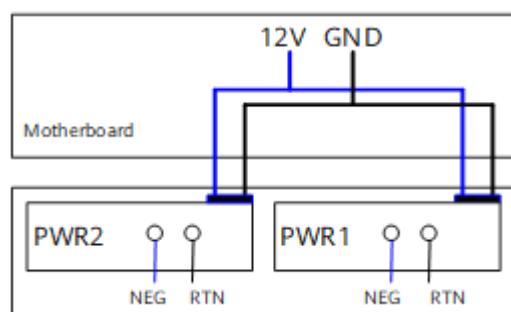
Display Mode	Color	Status	Description
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>• If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5730-36C-HI-24S uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

**Figure 4-423** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-423** Power supply connections of dual DC power modules



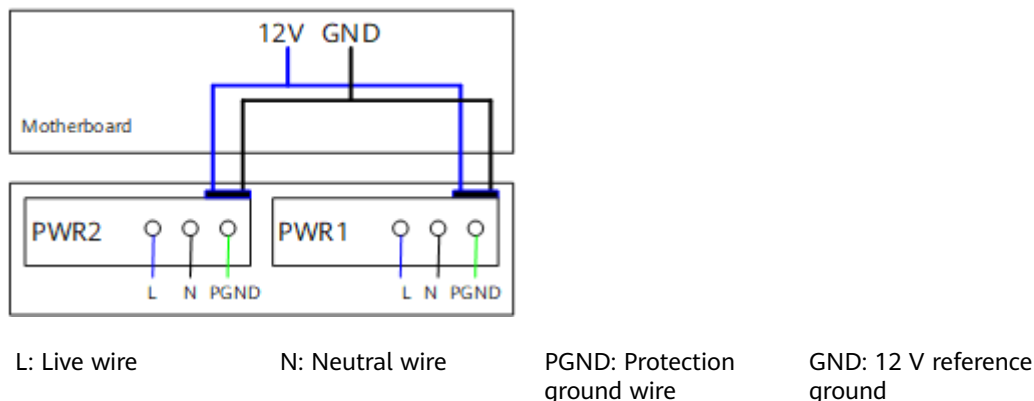
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

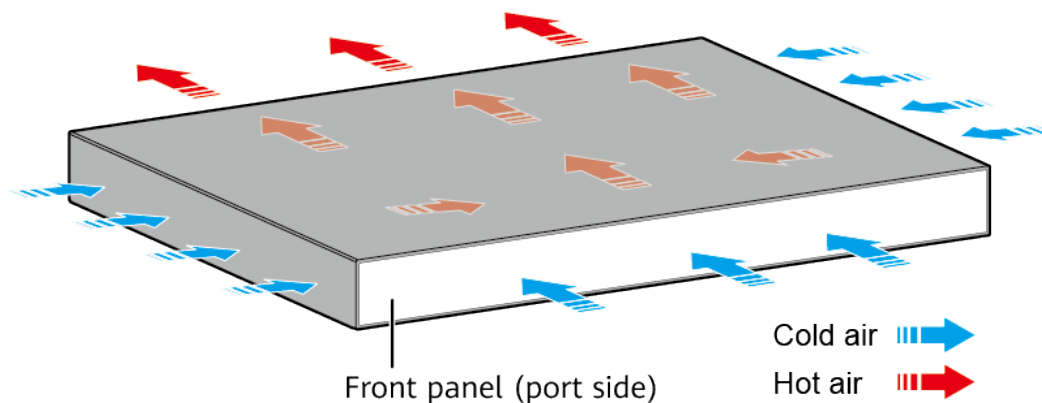
**Figure 4-424** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-424** Power supply connections of dual AC power modules



## Heat Dissipation

The S5730-36C-HI-24S uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1059** lists specifications of the S5730-36C-HI-24S.

**Table 4-1059** Technical specifications

Item	Description
Memory (RAM)	4 GB

Item	Description
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	48.12 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	9.49 kg (20.92 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	79 W (without card)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	66 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 62 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>



Item	Description
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02351XFQ

## 4.22.4 S5730-44C-HI

### Version Mapping

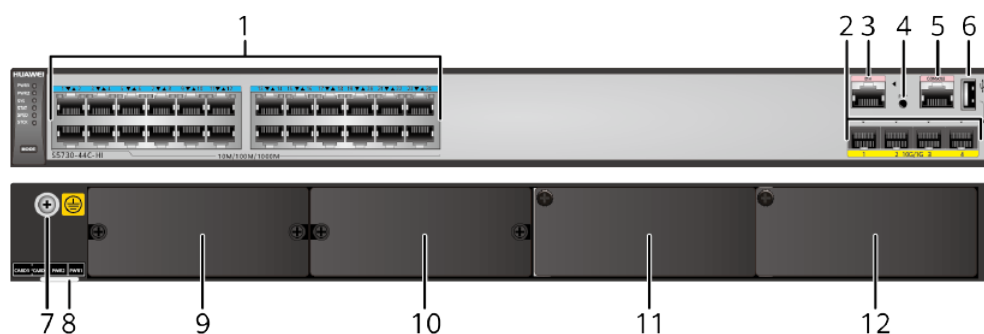
[Table 4-1060](#) lists the mapping between the S5730-44C-HI chassis and software versions.

**Table 4-1060** Version mapping

Series	Model	Software Version
S5730-HI	S5730-44C-HI	V200R012C00 to V200R019C10 versions

### Appearance and Structure

**Figure 4-425** S5730-44C-HI appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One ETH management port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	8	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot 1 <b>NOTE</b> Cards supported: <ul style="list-style-type: none"> <li>• <b>ES5D21Q02Q00</b></li> <li>• <b>ES5D21X08T00</b></li> <li>• <b>ES5D21X08S00</b></li> </ul>	10	Rear card slot 2 <b>NOTE</b> This slot is reserved for future use.

1 1	Power module slot 2  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	1 2	Power module slot 1  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1061](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1061** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1062](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1062** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1063](#).

**Table 4-1063** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1064](#) describes the attributes of an ETH management port.

**Table 4-1064** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

## USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

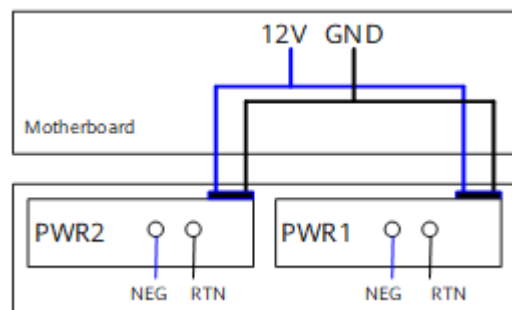
The S5730-44C-HI has similar indicators to those of the S5730-44C-PWH-HI except that the S5730-44C-HI does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5730-44C-HI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 4-426](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-426** Power supply connections of dual DC power modules



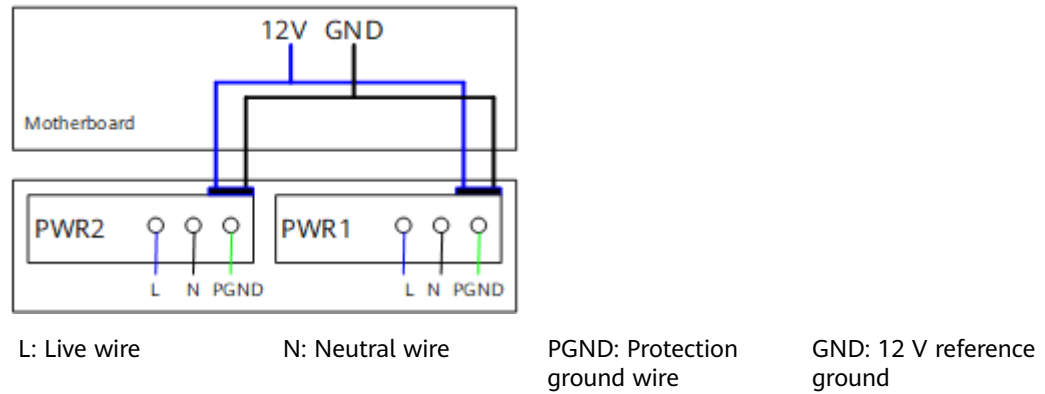
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

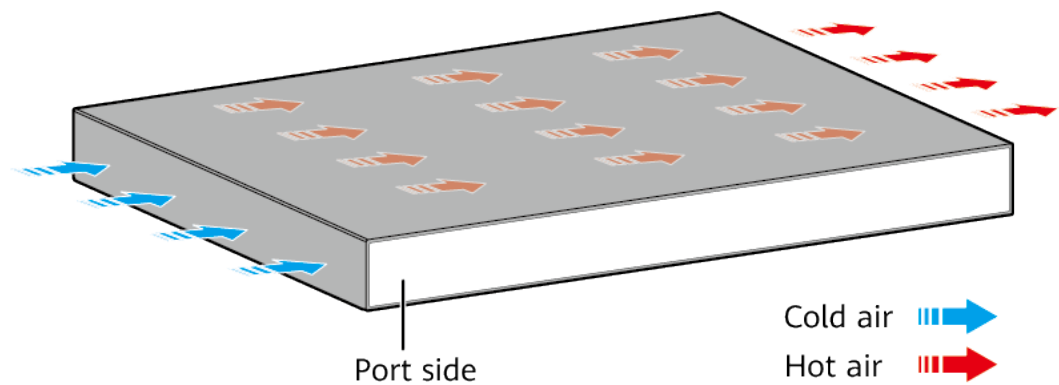
[Figure 4-427](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-427** Power supply connections of dual AC power modules



## Heat Dissipation

The S5730-44C-HI has three built-in fans for forced air cooling. The airflow direction is left-to-right.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1065** lists technical specifications of the S5730-44C-HI.

**Table 4-1065** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	50.95 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	8.5 kg (18.74 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	76.5 W (without card)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	54 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 55.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02351MQG

## 4.22.5 S5730-44C-PWH-HI

### Version Mapping

[Table 4-1066](#) lists the mapping between the S5730-44C-PWH-HI chassis and software versions.

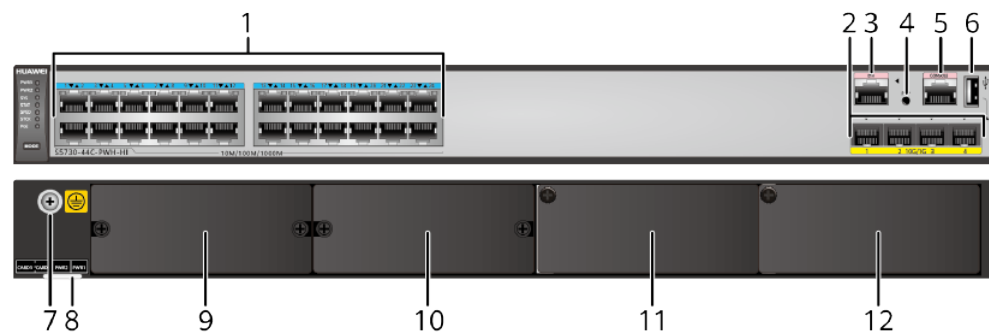


**Table 4-1066** Version mapping

Series	Model	Software Version
S5730-HI	S5730-44C-PWH-HI	V200R012C00 to V200R019C10 versions

## Appearance and Structure

**Figure 4-428** S5730-44C-PWH-HI appearance



1	Twenty-four PoE+ + 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
---	--	---	---

3	One ETH management port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot 1 <b>NOTE</b> Cards supported: <ul style="list-style-type: none"> <li>• <a href="#">ES5D21Q02Q00</a></li> <li>• <a href="#">ES5D21X08T00</a></li> <li>• <a href="#">ES5D21X08S00</a></li> </ul>	10	Rear card slot 2 <b>NOTE</b> This slot is reserved for future use.
11	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE Power Module</a></li> <li>• <a href="#">650 W DC PoE Power Module</a></li> <li>• <a href="#">1150 W AC PoE Power Module</a></li> <li>• <a href="#">1000 W AC PoE power module</a> (applicable in V200R013C00 and later versions)</li> </ul>	12	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE Power Module</a></li> <li>• <a href="#">650 W DC PoE Power Module</a></li> <li>• <a href="#">1150 W AC PoE Power Module</a></li> <li>• <a href="#">1000 W AC PoE power module</a> (applicable in V200R013C00 and later versions)</li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1067](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1067** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1068](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1068** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1069](#).

**Table 4-1069** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 4-1070** describes the attributes of an ETH management port.

**Table 4-1070** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

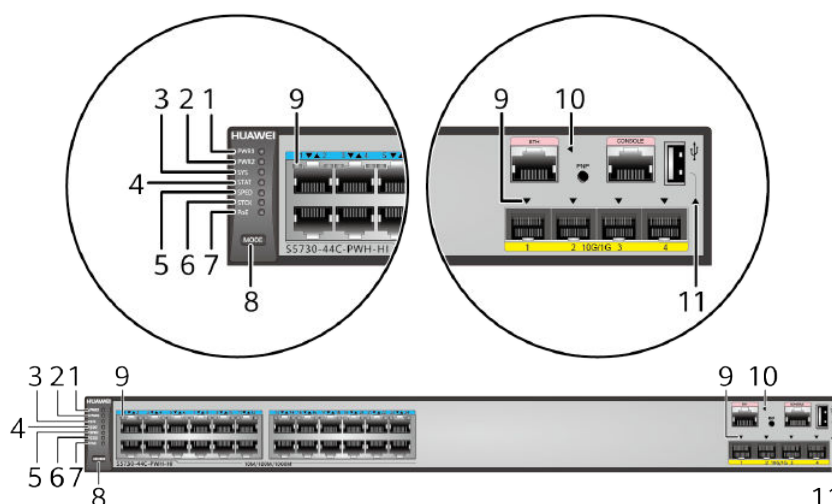
## Indicator Description

### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-429** Indicators on the S5730-44C-PWH-HI



### NOTE

The S5730-HI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5730-HI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

**Table 4-1071** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	In the system startup preparation phase, the SYS indicator is steady green for no more than 15 seconds.
			Green	Slow blinking	The system is running normally.

No.	Indicator	Name	Color	Status	Description
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator	Name	Color	Status	Description
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1072</a> .		
10	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
11	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>



No.	Indicator	Name	Color	Status	Description
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1072** Description of service port indicators in different modes

Display Mode	Color	Description
Status	Green	<ul style="list-style-type: none"> <li>Off: The port is not connected or has been shut down.</li> <li>Steady on: The port is connected.</li> <li>Blinking: The port is sending or receiving data.</li> </ul>
Speed	Green	<ul style="list-style-type: none"> <li>Off: The port is not connected or has been shut down.</li> <li>Steady on:                             <ul style="list-style-type: none"> <li>10M/100M/1000M port: The port is operating at 10/100 Mbit/s.</li> <li>1000M/10GE port: The port is operating at 1000 Mbit/s.</li> </ul> </li> <li>Blinking:                             <ul style="list-style-type: none"> <li>10M/100M/1000M port: The port is operating at 1000 Mbit/s.</li> <li>1000M/10GE port: The port is operating at 10 Gbit/s.</li> </ul> </li> </ul>

Display Mode	Color	Description
PoE	Green	<ul style="list-style-type: none"> <li>● Off: The port does not provide PoE power.</li> <li>● Steady on: The port is providing PoE power.</li> <li>● Blinking: The PD connected to the port is not a standard PD or its power exceeds the maximum power or power threshold of the port.</li> </ul>
Stack	Green	<ul style="list-style-type: none"> <li>● Off: The STCK mode is not selected.</li> <li>● If the indicator is steady on, the switch is not a master switch: <ul style="list-style-type: none"> <li>- If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>- If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul> </li> <li>● If the indicator is blinking, the switch is a master switch: <ul style="list-style-type: none"> <li>- If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>- If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul> </li> </ul>

## Power Supply Configuration

The S5730-44C-PWH-HI is a PoE switch. It has two power module slots, each of which can have a 500 W, 650 W, 1150 W, or 1000 W (applicable in V200R013C00 and later versions) power module installed. A 500 W AC power module and a 650 W DC power module can be used together in the switch. A 1150 W AC power module and a 1000 W AC power module can be used together in the switch.

[Table 4-1073](#) lists its power supply configurations.

**Table 4-1073** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W	-	369.6 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 12</li> <li>● 802.3bt (60 W per port): 6</li> </ul>
500 W	500 W	739.2 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 12</li> </ul>
650 W	-	350 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 22</li> <li>● 802.3at (30 W per port): 11</li> <li>● 802.3bt (60 W per port): 5</li> </ul>
650 W	500 W or 650 W	700 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 23</li> <li>● 802.3bt (60 W per port): 11</li> </ul>
500 W or 650 W	650 W		
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 13</li> </ul>
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 24</li> </ul>

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 24</li><li>• 802.3at (30 W per port): 14</li><li>• 802.3bt (60 W per port): 7</li></ul>
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 24</li><li>• 802.3at (30 W per port): 24</li><li>• 802.3bt (60 W per port): 14</li></ul>
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 24</li><li>• 802.3at (30 W per port): 24</li><li>• 802.3bt (60 W per port): 12</li></ul>
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 24</li><li>• 802.3at (30 W per port): 24</li><li>• 802.3bt (60 W per port): 24</li></ul>
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 24</li><li>• 802.3at (30 W per port): 24</li><li>• 802.3bt (60 W per port): 12</li></ul>
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 24</li><li>• 802.3at (30 W per port): 24</li><li>• 802.3bt (60 W per port): 24</li></ul>

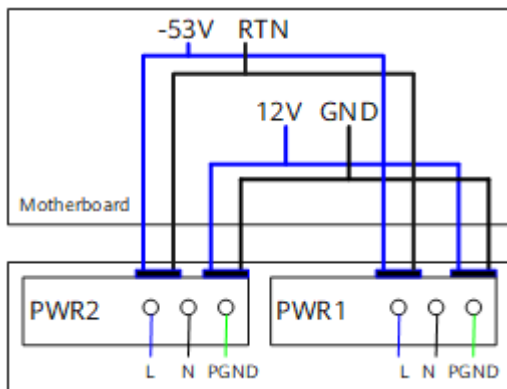
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 24</li> </ul>
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 24</li> </ul>
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 14</li> </ul>
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 14</li> </ul>

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

**Figure 4-430** shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

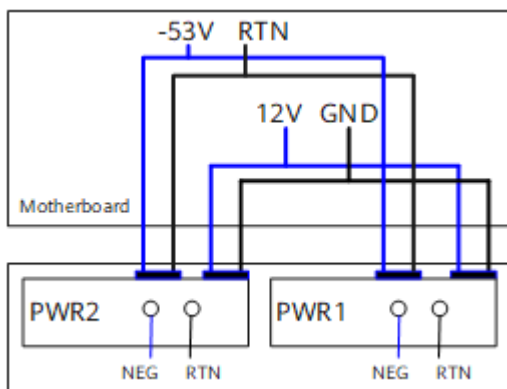
**Figure 4-430** Power supply by dual AC PoE power modules



L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

**Figure 4-431** shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

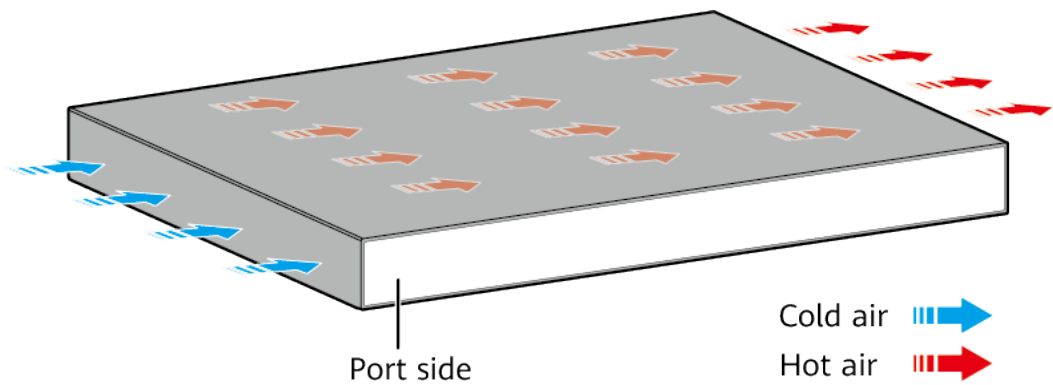
**Figure 4-431** Power supply connections of dual DC PoE power modules



NEG: negative wire      RTN: positive wire      GND: 12 V reference ground      RTN: -53 V reference ground

## Heat Dissipation

The S5730-44C-PWH-HI has three built-in fans for forced air cooling. The airflow direction is left-to-right.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1074** lists technical specifications of the S5730-44C-PWH-HI.

**Table 4-1074** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	49.48 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using 500 W AC or 1000 W AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using 650 W DC or 1150 W AC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>● Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>● Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul> <p>When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 541.1 mm (21.3 in.).</p>
Weight (with packaging)	8.5 kg (18.74 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>● Using 650 W DC power modules: <ul style="list-style-type: none"> <li>- Not providing the PoE function: 94 W (without card)</li> <li>- 100% PoE loads: 830 W (system power consumption: 130 W, PoE: 700 W, without card)</li> </ul> </li> <li>● Using 500 W AC power modules: <ul style="list-style-type: none"> <li>- Not providing the PoE function: 94 W (without card)</li> <li>- 100% PoE loads: 830 W (system power consumption: 90.8 W, PoE: 739.2 W, without card)</li> </ul> </li> <li>● Using 1150 W AC power modules or 1000 W AC power modules: <ul style="list-style-type: none"> <li>- Not providing the PoE function: 107.6 W (without card)</li> <li>- 100% PoE loads: 1596 W (system power consumption: 156 W, PoE: 1440 W, without card)</li> </ul> </li> </ul>



Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	Using 650 W DC or 500 W AC power modules: 65 W (without card) Using 1150 W AC or 1000 W AC power modules: 71 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 69.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02351LKB

## 4.22.6 S5730-44C-HI-24S

### Version Mapping

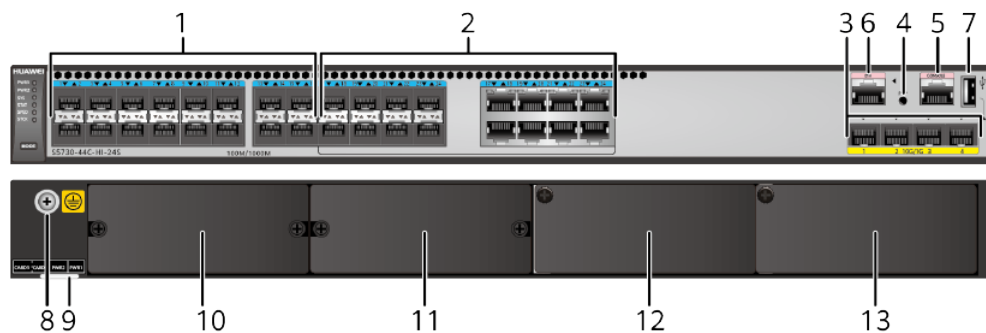
**Table 4-1075** lists the mapping between the S5730-44C-HI-24S chassis and software versions.

**Table 4-1075** Version mapping

Series	Model	Software Version
S5730-HI	S5730-44C-HI-24S	V200R012C00SPC110, V200R013C00 to V200R019C10 versions

## Appearance and Structure

**Figure 4-432** S5730-44C-HI-24S appearance



1	Sixteen 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario)</b></li> </ul>	2	Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario)</b></li> </ul>
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>	4	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	One ETH management port
7	One USB port	8	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>
9	<p>ESN label</p> <p><b>NOTE</b></p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>	10	<p>Rear card slot 1</p> <p><b>NOTE</b></p> <p>Cards supported:</p> <ul style="list-style-type: none"> <li>• <b>ES5D21Q02Q00</b></li> <li>• <b>ES5D21X08T00</b></li> <li>• <b>ES5D21X08S00</b></li> </ul>
11	<p>Rear card slot 2</p> <p><b>NOTE</b></p> <p>This slot is reserved for future use.</p>	12	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <b>150 W AC power module</b></li> <li>• <b>150 W DC power module</b></li> </ul>
13	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <b>150 W AC power module</b></li> <li>• <b>150 W DC power module</b></li> </ul>	-	-

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-1076](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-1076** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

#### NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1077](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1077** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1078](#).

**Table 4-1078** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1079](#) describes the attributes of an ETH management port.

**Table 4-1079** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

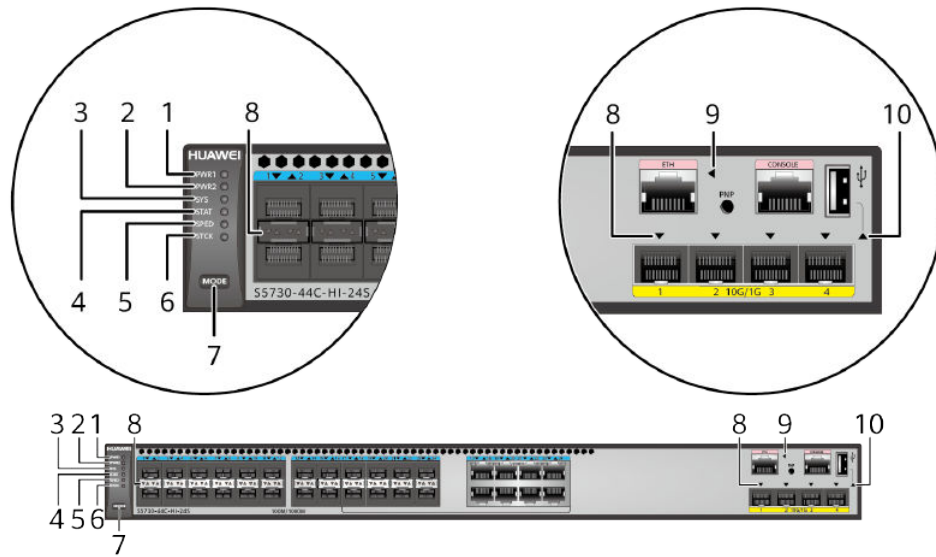
## Indicator Description

#### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-433** Indicators on the S5730-44C-HI-24S



**NOTE**

The S5730-HI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, and STCK) are used as fault indicators. When an S5730-HI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

**Table 4-1080** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.

No.	Indicator	Name	Color	Status	Description
			Yellow	Steady on	<p>The switch has two power modules installed. Any of the following situations occurs in power module slot 1:</p> <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	<p>The switch has two power modules installed. Any of the following situations occurs in power module slot 2:</p> <ul style="list-style-type: none"> <li>A power module is available in this slot but its power switch is in the OFF position.</li> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	In the system startup preparation phase, the SYS indicator is steady green for no more than 15 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.



No.	Indicator	Name	Color	Status	Description
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch.</li> </ul> <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1081</a> and <a href="#">Table 4-1082</a> .		
9	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.

No.	Indicator	Name	Color	Status	Description
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1081** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>

Display Mode	Color	Status	Description
	Green and yellow	Blinking	<p>The switch is the master switch in a stack.</p> <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

**Table 4-1082** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	<p>10M/100M/1000M port: The port is operating at 10/100 Mbit/s.</p> <p>1000M/10GE port: The port is operating at 1000 Mbit/s.</p>
	Green	Blinking	<p>10M/100M/1000M port: The port is operating at 1000 Mbit/s.</p> <p>1000M/10GE port: The port is operating at 10 Gbit/s.</p>
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	<p>The switch is not the master switch in a stack.</p> <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>

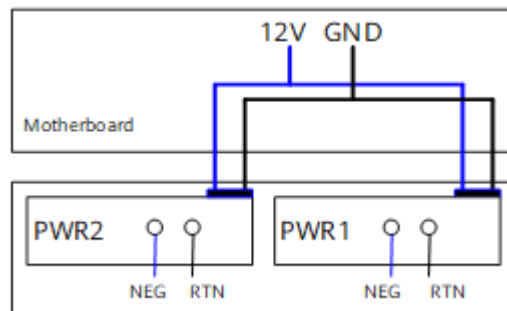
Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>

## Power Supply Configuration

The S5730-44C-HI-24S uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

**Figure 4-434** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-434** Power supply connections of dual DC power modules



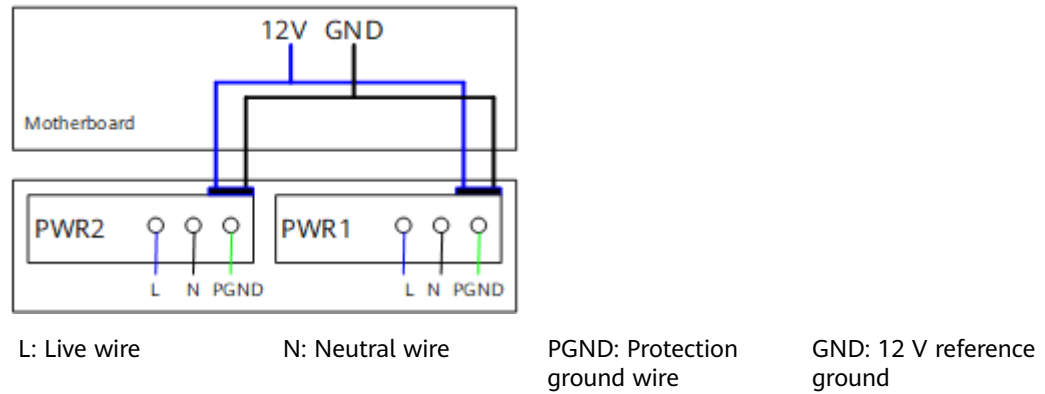
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

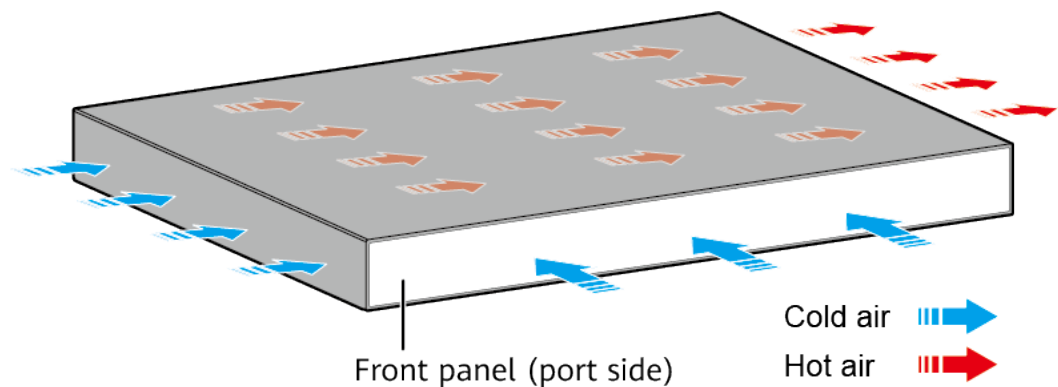
**Figure 4-435** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-435** Power supply connections of dual AC power modules



## Heat Dissipation

The S5730-44C-HI-24S has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1083** lists technical specifications of the S5730-44C-HI-24S.

**Table 4-1083** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	51.12 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	9.72 kg (21.43 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	78 W (without card)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	64 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 56.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>• AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>• DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02351XFR

## 4.22.7 S5730-60C-HI

### Version Mapping

[Table 4-1084](#) lists the mapping between the S5730-60C-HI chassis and software versions.

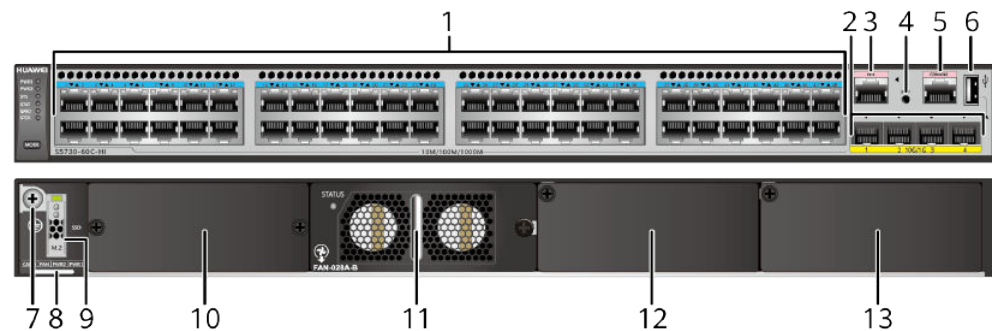


**Table 4-1084** Version mapping

Series	Model	Software Version
S5730-HI	S5730-60C-HI	V200R012C00 to V200R019C10 versions

## Appearance and Structure

**Figure 4-436** S5730-60C-HI appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
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3	One ETH management port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
9	SSD card slot <b>NOTE</b> Pluggable SSD card supported: <a href="#">SSD-240GB</a>	10	Rear card slot <b>NOTE</b> Cards supported: <ul style="list-style-type: none"> <li>• <a href="#">ES5D21Q02Q00</a></li> <li>• <a href="#">ES5D21X08T00</a></li> <li>• <a href="#">ES5D21X08S00</a></li> </ul>
11	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">FAN-028A-B</a>	12	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>
13	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1085](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1085** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1086](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1086** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1087](#).

**Table 4-1087** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1088](#) describes the attributes of an ETH management port.

**Table 4-1088** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

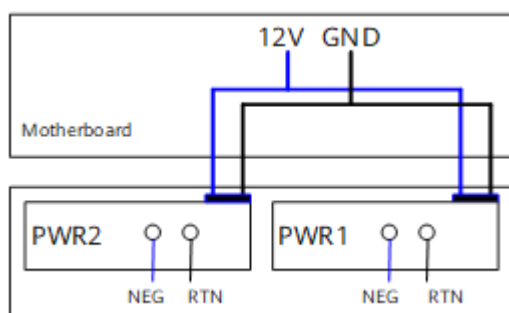
The S5730-60C-HI has similar indicators to those of the S5730-44C-PWH-HI except that the S5730-60C-HI does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5730-60C-HI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

**Figure 4-437** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-437** Power supply connections of dual DC power modules



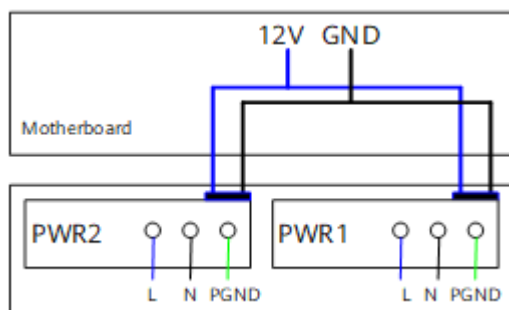
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

**Figure 4-438** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-438** Power supply connections of dual AC power modules



L: Live wire

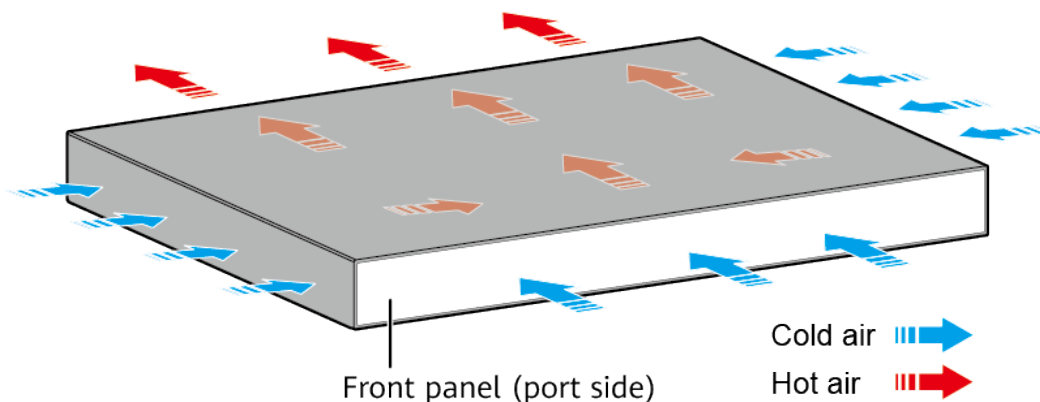
N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

## Heat Dissipation

The S5730-60C-HI uses a pluggable fan module for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1089](#) lists technical specifications of the S5730-60C-HI.

**Table 4-1089** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	47.28 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	8.8 kg (19.40 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	87.7 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	70 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 52.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> <li>AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	02351MQR

## 4.22.8 S5730-60C-PWH-HI

### Version Mapping

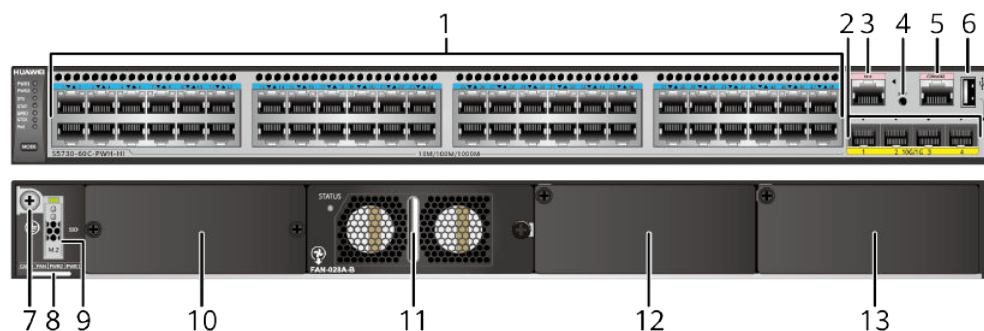
**Table 4-1090** lists the mapping between the S5730-60C-PWH-HI chassis and software versions.

**Table 4-1090** Version mapping

Series	Model	Software Version
S5730-HI	S5730-60C-PWH-HI	V200R012C00 to V200R019C10 versions

### Appearance and Structure

**Figure 4-439** S5730-60C-PWH-HI appearance





1	Forty-eight PoE+ + 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports  Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One ETH management port	4	One PNP button  <b>NOTICE</b>  To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.  To reset the switch, press the button.  Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	One USB port
7	Ground screw  <b>NOTE</b> It is used with a <b>ground cable</b> .	8	ESN label  <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
9	SSD card slot  <b>NOTE</b> Pluggable SSD card supported: <b>SSD-240GB</b>	10	Rear card slot  <b>NOTE</b> Cards supported: <ul style="list-style-type: none"> <li>• <b>ES5D21Q02Q00</b></li> <li>• <b>ES5D21X08T00</b></li> <li>• <b>ES5D21X08S00</b></li> </ul>

1 1	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">FAN-028A-B</a>	1 2	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE Power Module</a></li> <li>• <a href="#">650 W DC PoE Power Module</a></li> <li>• <a href="#">1150 W AC PoE Power Module</a></li> <li>• <a href="#">1000 W AC PoE power module</a> (applicable in V200R013C00 and later versions)</li> </ul>
1 3	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE Power Module</a></li> <li>• <a href="#">650 W DC PoE Power Module</a></li> <li>• <a href="#">1150 W AC PoE Power Module</a></li> <li>• <a href="#">1000 W AC PoE power module</a> (applicable in V200R013C00 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1091](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1091** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1092](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1092** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1093](#).

**Table 4-1093** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1094](#) describes the attributes of an ETH management port.

**Table 4-1094** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5730-60C-PWH-HI has the same types of indicators as the S5730-44C-PWH-HI. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5730-60C-PWH-HI is a PoE switch. It has two power module slots, each of which can have a 500 W, 650 W, 1150 W, or 1000 W (applicable in V200R013C00 and later versions) power module installed. A 500 W AC power module and a 650 W DC power module can be used together in the switch. A 1150 W AC power module and a 1000 W AC power module can be used together in the switch. [Table 4-1095](#) lists its power supply configurations.

**Table 4-1095** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> <li>802.3bt (60 W per port): 6</li> </ul>
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 12</li> </ul>
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 26</li> <li>802.3bt (60 W per port): 13</li> </ul>
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> <li>802.3bt (60 W per port): 24</li> </ul>
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 29</li> <li>802.3at (30 W per port): 14</li> <li>802.3bt (60 W per port): 7</li> </ul>
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 29</li> <li>802.3bt (60 W per port): 14</li> </ul>

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 25</li> <li>• 802.3bt (60 W per port): 12</li> </ul>
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 48</li> <li>• 802.3bt (60 W per port): 24</li> </ul>
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 25</li> <li>• 802.3bt (60 W per port): 12</li> </ul>
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 48</li> <li>• 802.3bt (60 W per port): 24</li> </ul>
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 48</li> <li>• 802.3bt (60 W per port): 24</li> </ul>
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 48</li> <li>• 802.3bt (60 W per port): 24</li> </ul>

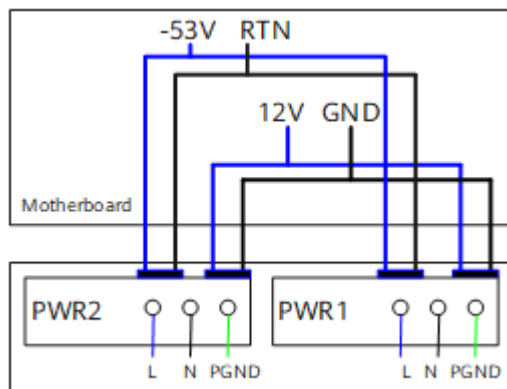
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 29</li> <li>802.3bt (60 W per port): 14</li> </ul>
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 29</li> <li>802.3bt (60 W per port): 14</li> </ul>

**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

**Figure 4-440** shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

**Figure 4-440** Power supply by dual AC PoE power modules

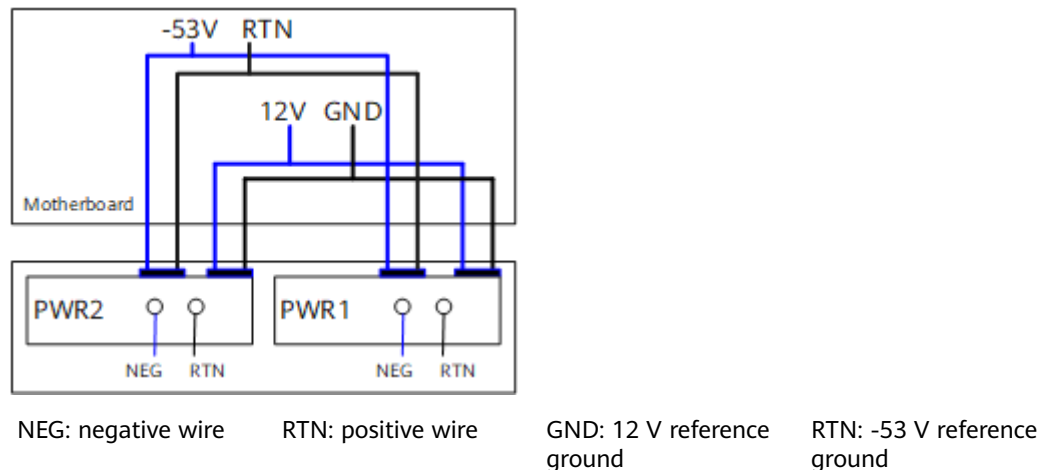


L: live wire      N: neutral wire      PGND: protection ground wire      GND: 12 V reference ground      RTN: -53 V reference ground

**Figure 4-441** shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V

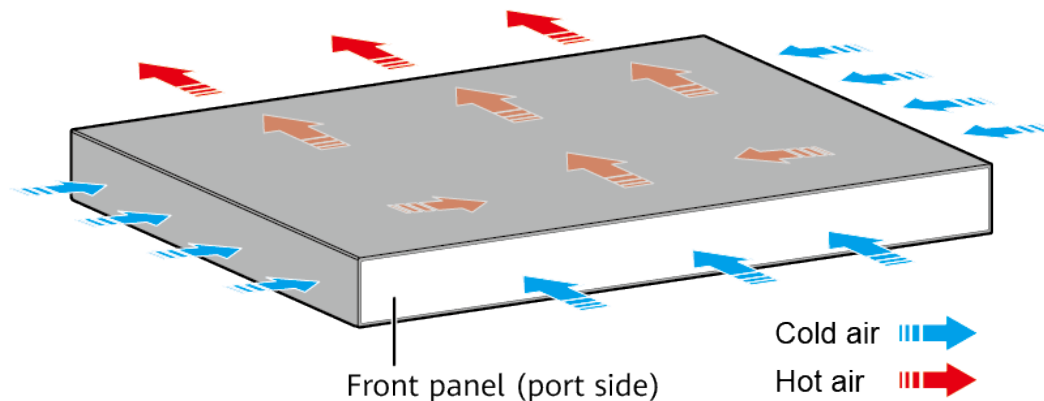
and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

**Figure 4-441** Power supply connections of dual DC PoE power modules



## Heat Dissipation

The S5730-60C-PWH-HI uses a pluggable fan module for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1096](#) lists technical specifications of the S5730-60C-PWH-HI.

**Table 4-1096** Technical specifications

Item	Description
Memory (RAM)	4 GB



Item	Description
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	46.09 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using 500 W AC or 1000 W AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using 650 W DC or 1150 W AC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul> <p>When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 541.1 mm (21.3 in.).</p>
Weight (with packaging)	9 kg (19.84 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"><li>Using 650 W DC or 500 W AC power modules:<ul style="list-style-type: none"><li>Not providing the PoE function: 106 W (without card)</li><li>100% PoE loads: 830 W (system power consumption: 90.8 W, PoE: 739.2 W, without card)</li></ul></li><li>Using 1150 W AC or 1000 W AC power modules:<ul style="list-style-type: none"><li>Not providing the PoE function: 119.7 W (without card)</li><li>100% PoE loads: 1610 W (system power consumption: 170 W, PoE: 1440 W, without card)</li></ul></li></ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"><li>Tested according to ATIS standard</li><li>EEE enabled</li><li>No PoE power consumption</li></ul>	Using 650 W DC or 500 W AC power modules: 80 W (without card) Using 1150 W AC or 1000 W AC power modules: 83 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 69 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>EMC certification</li><li>Safety certification</li><li>Manufacturing certification</li></ul>
Part number	02351MQV

## 4.2.2.9 S5730-60C-HI-48S

### Version Mapping

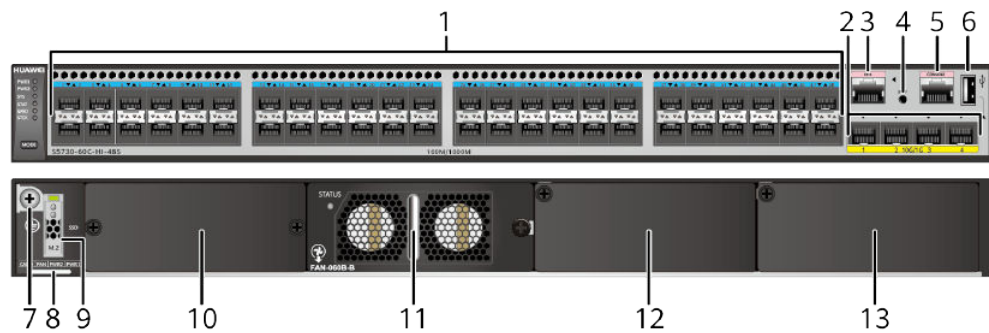
**Table 4-1097** lists the mapping between the S5730-60C-HI-48S chassis and software versions.

**Table 4-1097** Version mapping

Series	Model	Software Version
S5730-HI	S5730-60C-HI-48S	V200R013C00 to V200R019C10 versions

### Appearance and Structure

**Figure 4-442** S5730-60C-HI-48S appearance



1	<p>Forty-eight 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario)</b></li> </ul>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	<p>One ETH management port</p>	4	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	<p>One console port</p>	6	<p>One USB port</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	8	<p>ESN label</p> <p><b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>SSD card slot</p> <p><b>NOTE</b> Pluggable SSD card supported: <b>SSD-240GB</b></p>	10	<p>Rear card slot</p> <p><b>NOTE</b> Cards supported:</p> <ul style="list-style-type: none"> <li>• <b>ES5D21Q02Q00</b></li> <li>• <b>ES5D21X08T00</b></li> <li>• <b>ES5D21X08S00</b></li> </ul>

1 1	Fan slot <b>NOTE</b> Applicable fan module: <a href="#">7.7 FAN-060B-B (Fan box (B, FAN panel side exhaust))</a>	1 2	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">5.18 PDC-350WA-B (350 W DC Power Module)</a></li> <li>• <a href="#">5.19 PAC-600WA-B (600 W AC Power Module)</a></li> </ul>
1 3	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">5.18 PDC-350WA-B (350 W DC Power Module)</a></li> <li>• <a href="#">5.19 PAC-600WA-B (600 W AC Power Module)</a></li> </ul>	-	-

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-1098](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-1098** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1099](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1099** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1100](#).

**Table 4-1100** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1101](#) describes the attributes of an ETH management port.

**Table 4-1101** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

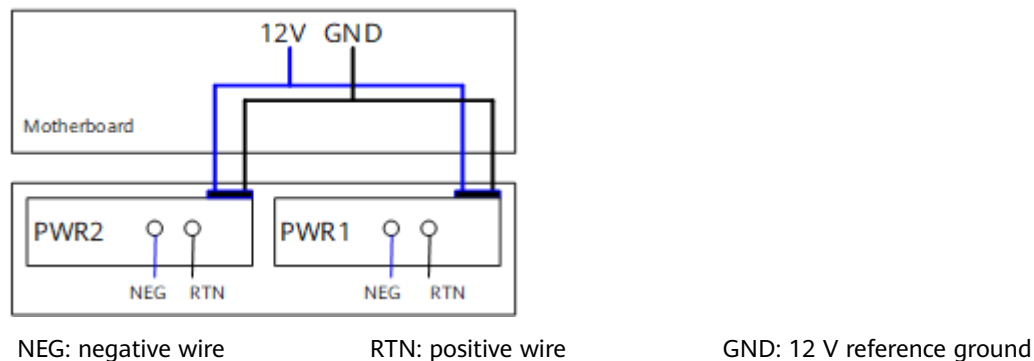
The S5730-60C-HI-48S has the same types of indicators as the S5730-36C-HI-24S. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5730-60C-HI-48S uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

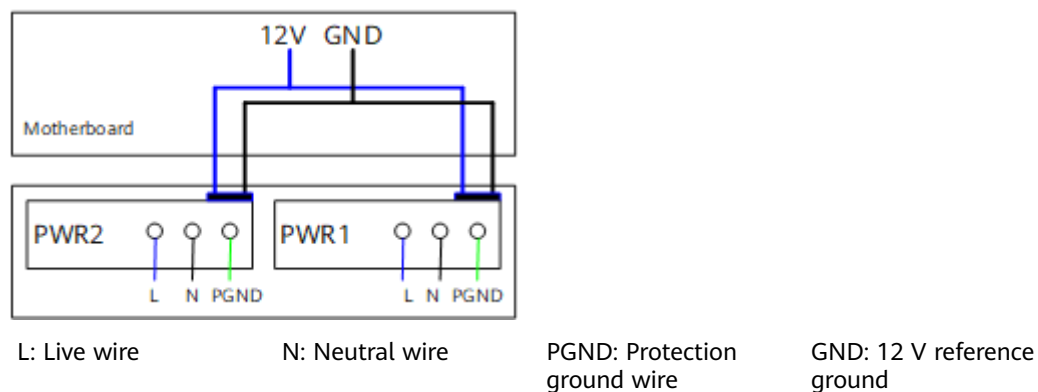
[Figure 4-443](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-443** Power supply connections of dual DC power modules



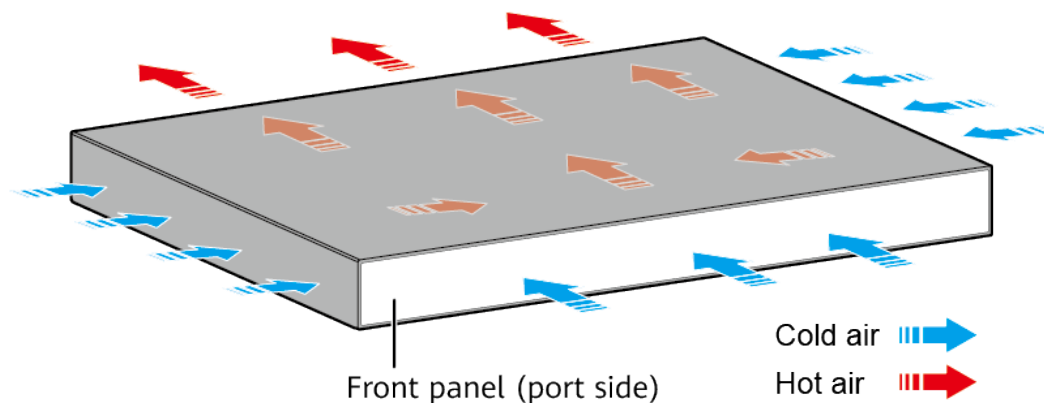
**Figure 4-444** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-444** Power supply connections of dual AC power modules



## Heat Dissipation

The S5730-60C-HI-48S uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.





 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1102](#) lists specifications of the S5730-60C-HI-48S.

**Table 4-1102** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	45.53 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	N/A
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>
Weight (with packaging)	9.71 kg (21.41 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	136 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"><li>• Tested according to ATIS standard</li><li>• EEE enabled</li><li>• No PoE power consumption</li></ul>	100 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 67.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02351XFS

## 4.22.10 S5730-68C-HI

## Version Mapping

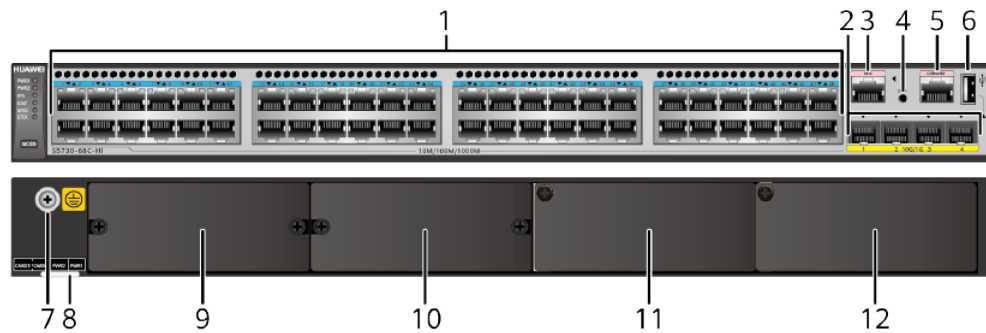
**Table 4-1103** lists the mapping between the S5730-68C-HI chassis and software versions.

**Table 4-1103** Version mapping

Series	Model	Software Version
S5730-HI	S5730-68C-HI	V200R012C00 to V200R019C10 versions

## Appearance and Structure

**Figure 4-445** S5730-68C-HI appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
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3	One ETH management port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	One USB port
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	ESN label <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot 1 <b>NOTE</b> Cards supported: <ul style="list-style-type: none"> <li>• <a href="#">ES5D21Q02Q00</a></li> <li>• <a href="#">ES5D21X08T00</a></li> <li>• <a href="#">ES5D21X08S00</a></li> </ul>	10	Rear card slot 2 <b>NOTE</b> This slot is reserved for future use.
11	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>	12	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">150 W AC power module</a></li> <li>• <a href="#">150 W DC power module</a></li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1104](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1104** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1105](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1105** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1106](#).

**Table 4-1106** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1107](#) describes the attributes of an ETH management port.

**Table 4-1107** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

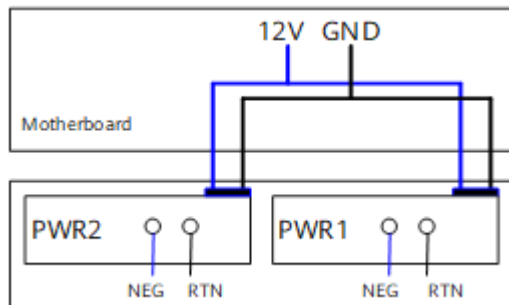
The S5730-68C-HI has similar indicators to those of the S5730-44C-PWH-HI except that the S5730-68C-HI does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5730-68C-HI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

**Figure 4-446** shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-446** Power supply connections of dual DC power modules



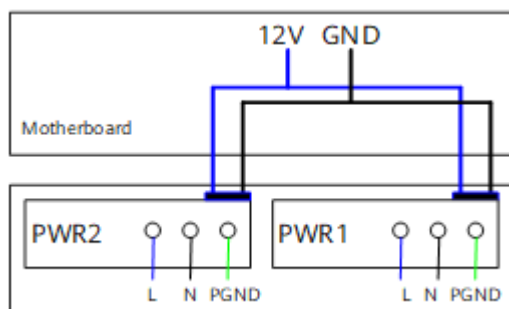
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

**Figure 4-447** shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-447** Power supply connections of dual AC power modules



L: Live wire

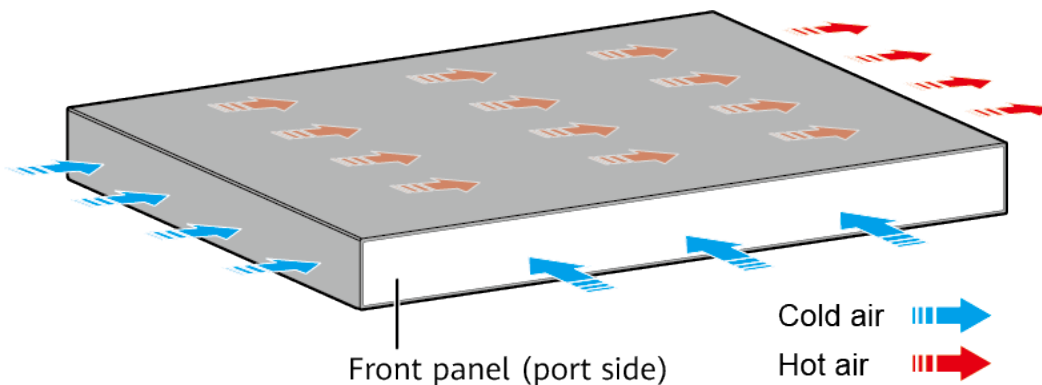
N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

## Heat Dissipation

The S5730-68C-HI has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1108** lists technical specifications of the S5730-68C-HI.

**Table 4-1108** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	49.29 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul>



Item	Description
Weight (with packaging)	8.5 kg (18.74 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	88.05 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	62 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 55.6 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	<ul style="list-style-type: none"> <li>AC power modules configured: 0-5000 m (0-16404 ft.)</li> <li>DC power modules configured: 0-2000 m (0-6562 ft.)</li> </ul>
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	02351MQT

## 4.22.11 S5730-68C-PWH-HI

### Version Mapping

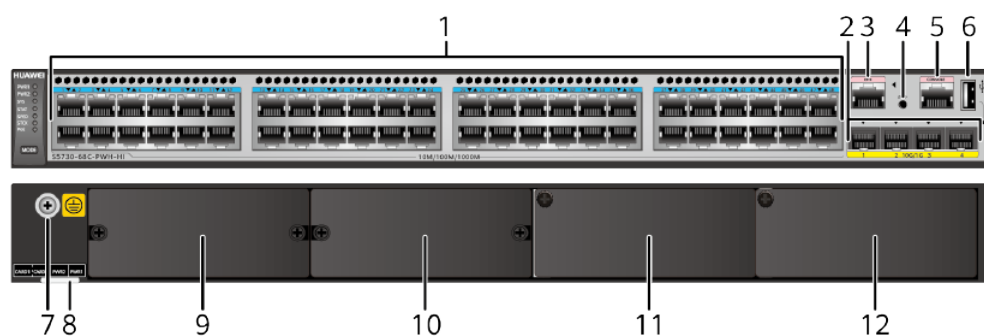
**Table 4-1109** lists the mapping between the S5730-68C-PWH-HI chassis and software versions.

**Table 4-1109** Version mapping

Series	Model	Software Version
S5730-HI	S5730-68C-PWH-HI	V200R012C00 to V200R019C10 versions

### Appearance and Structure

**Figure 4-448** S5730-68C-PWH-HI appearance



1	Forty-eight PoE+ + 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports  Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One ETH management port	4	One PNP button  <b>NOTICE</b>  To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.  To reset the switch, press the button.  Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	One USB port
7	Ground screw  <b>NOTE</b> It is used with a <b>ground cable</b> .	8	ESN label  <b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot 1  <b>NOTE</b> Cards supported: <ul style="list-style-type: none"> <li>• <b>ES5D21Q02Q00</b></li> <li>• <b>ES5D21X08T00</b></li> <li>• <b>ES5D21X08S00</b></li> </ul>	10	Rear card slot 2  <b>NOTE</b> This slot is reserved for future use.

1 1	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE Power Module</a></li> <li>• <a href="#">650 W DC PoE Power Module</a></li> <li>• <a href="#">1150 W AC PoE Power Module</a></li> <li>• <a href="#">1000 W AC PoE power module</a> (applicable in V200R013C00 and later versions)</li> </ul>	1 2	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">500 W AC PoE Power Module</a></li> <li>• <a href="#">650 W DC PoE Power Module</a></li> <li>• <a href="#">1150 W AC PoE Power Module</a></li> <li>• <a href="#">1000 W AC PoE power module</a> (applicable in V200R013C00 and later versions)</li> </ul>
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1110](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1110** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1111](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1111** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1112](#).

**Table 4-1112** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1113](#) describes the attributes of an ETH management port.

**Table 4-1113** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5730-68C-PWH-HI has the same types of indicators as the S5730-44C-PWH-HI. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5730-68C-PWH-HI is a PoE switch. It has two power module slots, each of which can have a 500 W, 650 W, 1150 W, or 1000 W (applicable in V200R013C00 and later versions) power module installed. A 500 W AC power module and a 650 W DC power module can be used together in the switch. A 1150 W AC power module and a 1000 W AC power module can be used together in the switch. [Table 4-1114](#) lists its power supply configurations.

**Table 4-1114** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W	-	369.6 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 12</li> <li>● 802.3bt (60 W per port): 6</li> </ul>
500 W	500 W	739.2 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 12</li> </ul>

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
650 W	-	350 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 22</li> <li>• 802.3at (30 W per port): 11</li> <li>• 802.3bt (60 W per port): 5</li> </ul>
650 W	500 W or 650 W	700 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 45</li> <li>• 802.3at (30 W per port): 23</li> <li>• 802.3bt (60 W per port): 11</li> </ul>
500 W or 650 W	650 W		
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 26</li> <li>• 802.3bt (60 W per port): 13</li> </ul>
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 48</li> <li>• 802.3bt (60 W per port): 24</li> </ul>
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 29</li> <li>• 802.3at (30 W per port): 14</li> <li>• 802.3bt (60 W per port): 7</li> </ul>
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 29</li> <li>• 802.3bt (60 W per port): 14</li> </ul>

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 25</li> <li>• 802.3bt (60 W per port): 12</li> </ul>
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 48</li> <li>• 802.3bt (60 W per port): 24</li> </ul>
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 25</li> <li>• 802.3bt (60 W per port): 12</li> </ul>
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 48</li> <li>• 802.3bt (60 W per port): 24</li> </ul>
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 48</li> <li>• 802.3bt (60 W per port): 24</li> </ul>
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 48</li> <li>• 802.3bt (60 W per port): 24</li> </ul>



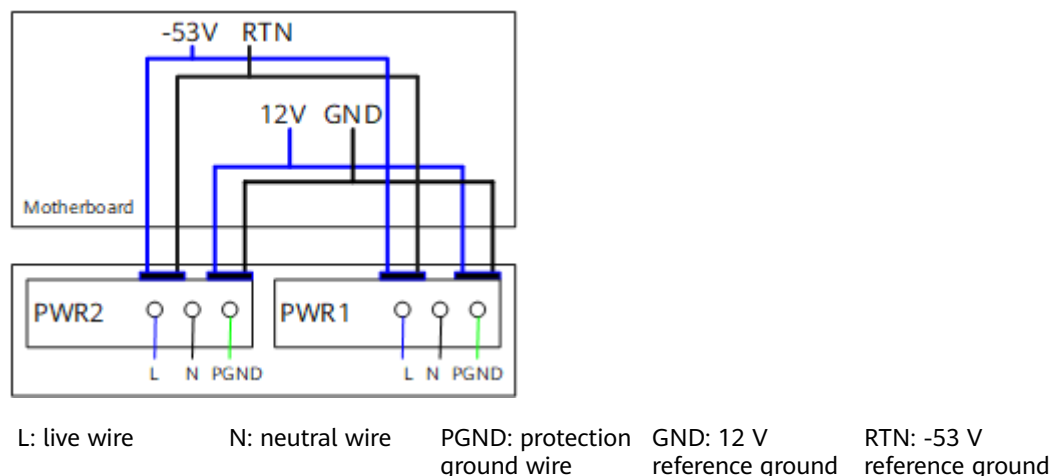
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 29</li> <li>802.3bt (60 W per port): 14</li> </ul>
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 29</li> <li>802.3bt (60 W per port): 14</li> </ul>

**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

**Figure 4-449** shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

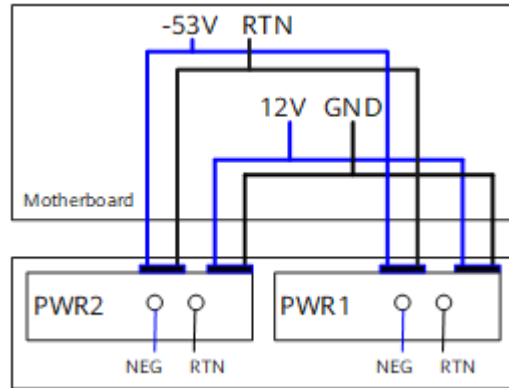
**Figure 4-449** Power supply by dual AC PoE power modules



**Figure 4-450** shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V

and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

**Figure 4-450** Power supply connections of dual DC PoE power modules



NEG: negative wire

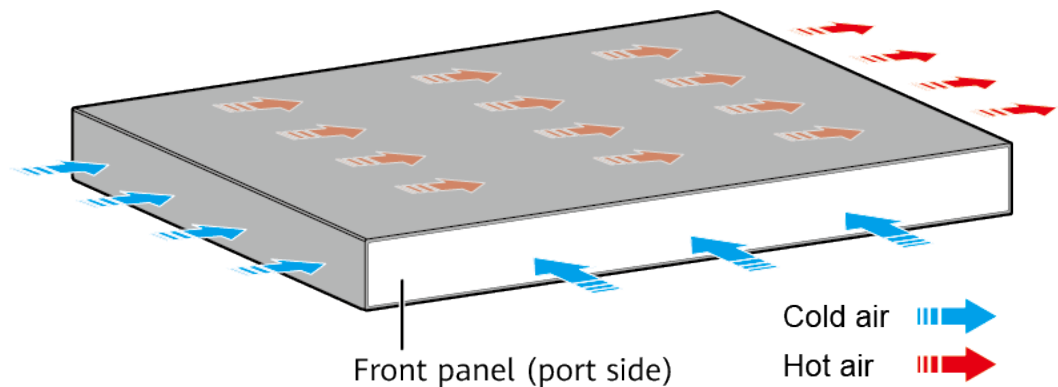
RTN: positive wire

GND: 12 V reference ground

RTN: -53 V reference ground

## Heat Dissipation

The S5730-68C-PWH-HI has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1115** lists technical specifications of the S5730-68C-PWH-HI.

**Table 4-1115** Technical specifications

Item	Description
Memory (RAM)	2 GB

Item	Description
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	48.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using 500 W AC or 1000 W AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using 650 W DC or 1150 W AC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li> </ul> <p>When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 541.1 mm (21.3 in.).</p>
Weight (with packaging)	8.7 kg (19.18 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>● Using 650 W DC power modules:                             <ul style="list-style-type: none"> <li>- Not providing the PoE function: 106 W (without card)</li> <li>- 100% PoE loads: 830 W (system power consumption: 130 W, PoE: 700 W, without card)</li> </ul> </li> <li>● Using 500 W AC power modules:                             <ul style="list-style-type: none"> <li>- Not providing the PoE function: 106 W (without card)</li> <li>- 100% PoE loads: 830 W (system power consumption: 90.8 W, PoE: 739.2 W, without card)</li> </ul> </li> <li>● Using 1150 W AC or 1000 W AC power modules:                             <ul style="list-style-type: none"> <li>- Not providing the PoE function: 116.3 W (without card)</li> <li>- 100% PoE loads: 1608 W (system power consumption: 168 W, PoE: 1440 W, without card)</li> </ul> </li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>● Tested according to ATIS standard</li> <li>● EEE enabled</li> <li>● No PoE power consumption</li> </ul>	Using 650 W DC or 500 W AC power modules: 72 W (without card) Using 1150 W AC or 1000 W AC power modules: 76 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 69.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>● EMC certification</li> <li>● Safety certification</li> <li>● Manufacturing certification</li> </ul>

Item	Description
Part number	02351LKE

## 4.22.12 S5730-68C-HI-48S

### Version Mapping

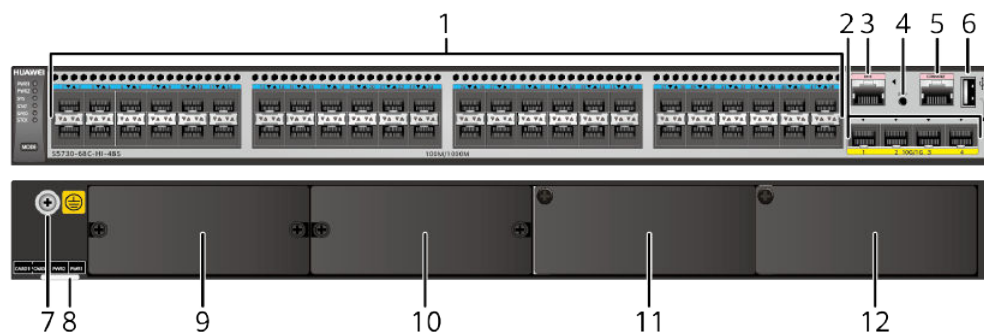
**Table 4-1116** lists the mapping between the S5730-68C-HI-48S chassis and software versions.

**Table 4-1116** Version mapping

Series	Model	Software Version
S5730-HI	S5730-68C-HI-48S	V200R013C00 to V200R019C10 versions

### Appearance and Structure

**Figure 4-451** S5730-68C-HI-48S appearance



1	<p>Forty-eight 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> <li>• <b>GE-CWDM optical module (used only in the OADM scenario)</b></li> </ul>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	<p>One ETH management port</p>	4	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	<p>One console port</p>	6	<p>One USB port</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	8	<p>ESN label</p> <p><b>NOTE</b> You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Rear card slot 1</p> <p><b>NOTE</b> Cards supported:</p> <ul style="list-style-type: none"> <li>• <b>ES5D21Q02Q00</b></li> <li>• <b>ES5D21X08T00</b></li> <li>• <b>ES5D21X08S00</b></li> </ul>	10	<p>Rear card slot 2</p> <p><b>NOTE</b> This slot is reserved for future use.</p>

1 1	Power module slot 2  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">5.18 PDC-350WA-B (350 W DC Power Module)</a></li> <li>• <a href="#">5.19 PAC-600WA-B (600 W AC Power Module)</a></li> </ul>	1 2	Power module slot 1  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">5.18 PDC-350WA-B (350 W DC Power Module)</a></li> <li>• <a href="#">5.19 PAC-600WA-B (600 W AC Power Module)</a></li> </ul>
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## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-1117](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-1117** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1118](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1118** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1119](#).

**Table 4-1119** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1120](#) describes the attributes of an ETH management port.

**Table 4-1120** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to



the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

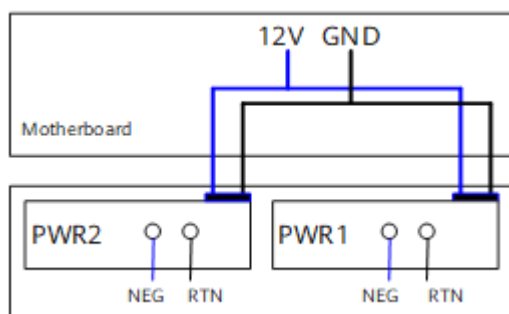
The S5730-68C-HI-48S has the same types of indicators as the S5730-36C-HI-24S. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5730-68C-HI-48S uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 4-452](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-452** Power supply connections of dual DC power modules



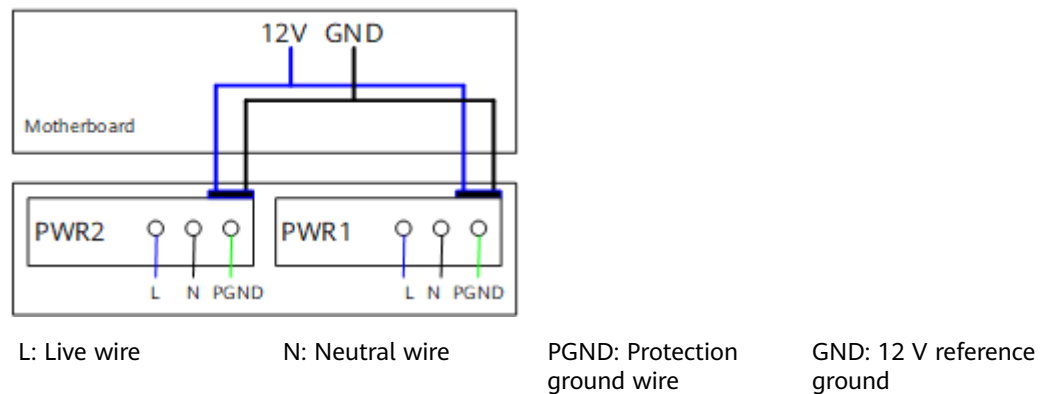
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

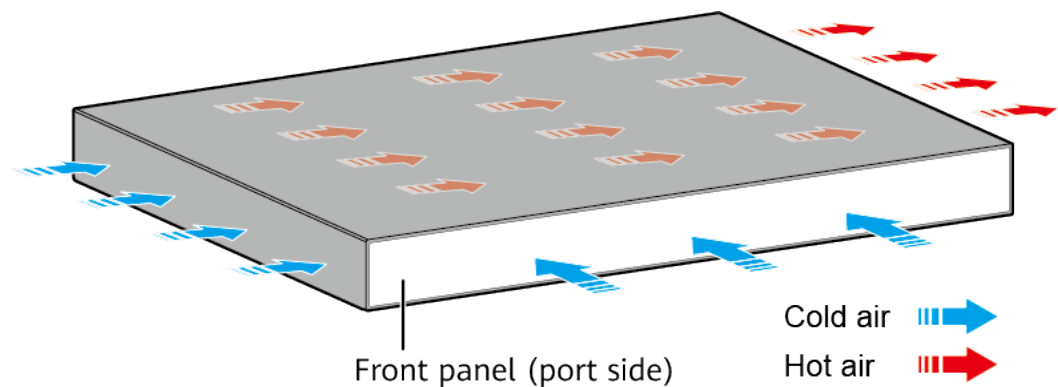
[Figure 4-453](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

**Figure 4-453** Power supply connections of dual AC power modules



## Heat Dissipation

The S5730-68C-HI-48S has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1121** lists specifications of the S5730-68C-HI-48S.

**Table 4-1121** Technical specifications

Item	Parameter
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	46.49 years

Item	Parameter
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	N/A
Power supply surge protection	<ul style="list-style-type: none"><li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li><li>Using DC power modules: <math>\pm 1</math> kV in differential mode, <math>\pm 2</math> kV in common mode</li></ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"><li>Basic dimensions (excluding the parts protruding from the body): 44.4 mm x 442.0 mm x 424.7 mm (1.75 in. x 17.4 in. x 16.72 in.)</li><li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 44.4 mm x 442.0 mm x 451.8 mm (1.75 in. x 17.4 in. x 17.79 in.)</li></ul>
Weight (with packaging)	9.39 kg (20.7 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	124 W (without card)

Item	Parameter
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	100 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 64.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02351XFT

## 4.23 S5731-L

### 4.23.1 S5731-L4P2HW-RUA

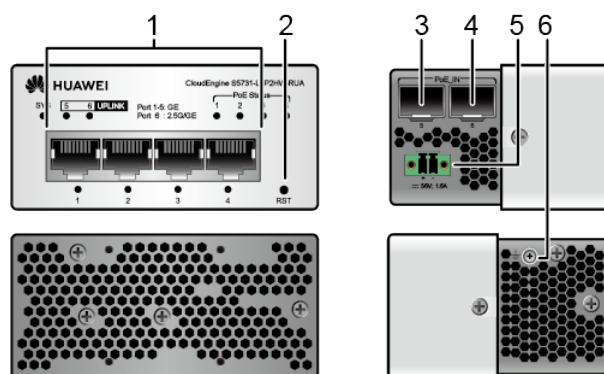
## Overview

**Table 4-1122** Basic information about the S5731-L4P2HW-RUA

Item	Details
Description	S5731-L4P2HW-RUA (4*10/100/1000BASE-T ports, PoE++, 2*GE hybrid optical-electrical SFP ports, AC power, power adapter)
Part Number	98011766
Model	S5731-L4P2HW-RUA
First supported version	V200R021C10SPC500 V600R022C10
Remarks	The RU itself does not have a software version. Instead, the first supported version of the RU depends on the software version of the central switch and varies for central switches running V200 and V600.

## Components

**Figure 4-454** S5731-L4P2HW-RUA appearance



1	Four 10/100/1000BASE-T PoE++ ports	2	One RST button <b>NOTICE</b> To reset the device, press and hold down the button for less than 6s.
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3	<p>One GE hybrid optical-electrical port</p> <p><b>NOTE</b></p> <p>The port is an uplink port.</p> <p>The port can receive PoE power from a central switch through the second-generation hybrid cable.</p> <p>When using a hybrid cable to receive power, you must use the pigtails or jumpers and hybrid modules matching the second-generation hybrid cable.</p>	4	<p>One GE/2.5GE hybrid optical-electrical port</p> <p><b>NOTE</b></p> <p>The port is an uplink port.</p> <p>The 2.5GE rate is supported in V200R023C00 or V600R023C00 and later versions.</p> <p>The port can receive PoE power from a central switch through the second-generation hybrid cable.</p> <p>When using a hybrid cable to receive power, you must use the pigtails or jumpers and hybrid modules matching the second-generation hybrid cable.</p>
5	<p>Power adapter socket (phoenix connector)</p> <p><b>NOTE</b></p> <p>Use the power adapter (56 V, 1.6 A) delivered with the device.</p>	6	<p>Ground screw</p>

## Ports

**Table 4-1123** Ports on the S5731-L4P2HW-RUA

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE++ port	RJ45	<p>A 10/100/1000BASE-T PoE++ Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.</p> <p>The port supports the PoE function.</p>	<p><a href="#">Ethernet cable</a></p>

Port	Connector Type	Description	Available Components
GE hybrid optical-electrical port	SFP	A GE hybrid optical-electrical port can send and receive data at 1000 Mbit/s. It can receive PoE power from a central switch through a hybrid cable.	<ul style="list-style-type: none"> <li>● <b>Industrial optical modules (only optical modules with 1 Gbit/s transmission speed and transmission distances less than or equal to 10 km are supported)</b></li> <li>● <b>GE SFP Hybrid Modules</b></li> <li>● <b>Second-generation hybrid cable</b></li> </ul>

Port	Connector Type	Description	Available Components
GE/2.5GE hybrid optical-electrical port	SFP	A GE/2.5GE hybrid optical-electrical port can send and receive data at 1000 Mbit/s or 2.5 Gbit/s. It can receive PoE power from a central switch through a hybrid cable.	<ul style="list-style-type: none"> <li>• <b>Industrial optical modules (only optical modules with 1 Gbit/s transmission speed and transmission distances less than or equal to 10 km are supported)</b></li> <li>• <b>GE SFP Hybrid Modules</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li> <li>• <b>2.5GE eSFP Hybrid Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li> <li>• <b>Second-generation hybrid cable</b></li> </ul>

## Indicators and Buttons

The S5731-L4P2HW-RUA has similar indicators to those on the S5731-L8P2HT-RUA. For details, see the S5731-L8P2HT-RUA.

## Power Supply System

The remote unit supports the following power supply modes:

- Powered by an external power adapter



- Powered by a central switch using hybrid cables

When different power supply modes are used at the same time, the system preferentially uses the power adapter for power supply. The cold backup mode is used between different power supply modes and cannot supply power to the remote unit at the same time. The two uplink ports have no default priority, and the connection time is used as the priority.

The remote unit can provide PoE power for external PDs. The PoE power supply capability varies according to the power supply mode.

**Table 4-1124** Power supply configurations

Power Supply Mode	Available PoE Power	Maximum Number of Ports (Fully Loaded)	Remark
Powered by an external power adapter	77 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 4</li> <li>• 802.3at (30 W per port): 2</li> <li>• 802.3bt (60 W per port): 1</li> </ul>	-
Powered by a central switch	Forcible power supply disabled (default): max 60 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 3</li> <li>• 802.3at (30 W per port): 2</li> <li>• 802.3bt (60 W per port): 1</li> </ul>	<ul style="list-style-type: none"> <li>• If no PD is connected to the remote unit, the central switch only supplies power to the remote unit. The PoE standard of the central switch must be 802.3at at least.</li> <li>• If PDs are connected to the remote unit, the central switch supplies power to the remote unit and the connected PDs. It is recommended that the output PoE standard of the central switch be 802.3bt and the output power be 90 W. If the 802.3at standard is used, the available power of the PDs connected to the remote unit may be insufficient.</li> </ul>
	Forcible power supply enabled: max 83 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 4</li> <li>• 802.3at (30 W per port): 2</li> <li>• 802.3bt (60 W per port): 1</li> </ul>	

## NOTICE

When the remote unit is powered by the central switch, the total power consumption of the remote unit and its connected PDs cannot exceed 71.3 W. If the power consumption exceeds 71.3 W, the remote unit and its connected PDs will be powered off and restarted.

When the remote unit is powered by the central switch, the maximum available PoE power in the preceding table can be provided only when the following conditions are met:

- When forcible power supply is disabled by default:
  - The PoE output of the central switch must comply with the 802.3bt class8 standard.
- When forcible power supply is enabled (using the **poE force-power port** command):
  - The PoE output of the central switch must comply with the 802.3bt class8 standard.
  - The central switch and the remote unit must be connected for a short distance (less than 8 m, with the line loss ignored). If the distance between the central switch and the remote unit is longer than 8 m and the PD is supplied with power based on the maximum power supply capability displayed on the central switch, the remote unit and the connected PD may be powered off and restarted.
  - The output voltage of the power module used by the central switch cannot be lower than 55.5 V.

The actual available PoE power provided by the remote unit is calculated based on the cabling distance between the central switch and the remote unit, the cabling distance between the remote unit and the connected PD, the maximum power consumption of the remote unit, the PoE output voltage of the central switch, and PoE class level output by the central switch.

If the power output of the remote unit is manually configured to comply with 802.3at or 802.3af, the PD connected to the remote unit will be power-cycled when the remote unit is reset due to a cause other than power-off.

## Heat Dissipation System

The remote unit has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1125** Technical specifications of the S5731-L4P2HW-RUA

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 45.0 mm x 90.0 mm x 75.0 mm (1.77 in. x 3.54 in. x 2.95 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 45.0 mm x 90.0 mm x 75.0 mm (1.77 in. x 3.54 in. x 2.95 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	92.0 mm x 340.0 mm x 222.0 mm (3.62 in. x 13.39 in. x 8.74 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	0.98 kg (2.16 lb)
Weight with packaging [kg(lb)]	1.36 kg (3.0 lb)
Typical power consumption [W]	6.67 W (device) 8.26 W (device + power adapter)
Typical heat dissipation [BTU/hour]	22.76 (device) 28.18 (device + power adapter)
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 7.00 W (device)/8.59 W (device + power adapter)</li> <li>Full PoE load: 88.5 W (PoE: 77 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 23.88 (device)/29.31 (device + power adapter)</li> <li>Full PoE load: 301.97</li> </ul>
Static power consumption [W]	5.62 W
MTBF [years]	75.17 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans): < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans): < 20
Number of card slots	0
Number of power slots	0

Item	Specification
Number of fans modules	0
Redundant power supply	Cold backup of hybrid optical-electrical ports and power adapters, cold backup between two hybrid optical-electrical ports, and preferential power supply by power adapters
Long-term operating temperature [°C(°F)]	-5°C to +40°C (41°F to 104°F) at an altitude of 0-1800 m (0-5905.44 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5905.44-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (721.78 ft.). The device cannot start when the temperature is lower than 0°C (32°F). The operating temperature of the device ranges from -5°C to +40°C (23°F to 104°F) when the following optical modules are used: - GE industrial optical modules with a transmission distance of less than or equal to 10 km
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	<ul style="list-style-type: none"> <li>● Power adapter</li> <li>● PoE_IN</li> </ul>
Rated input voltage [V]	Power adapter input: 100-240 V AC; 50/60 Hz PoE input: 56 V DC
Input voltage range [V]	Power adapter input: 90-290 V AC; 47-63 Hz PoE input: 54-57 V DC
Maximum input current [A]	1.8 A
Memory	--
Flash memory	--
Console port	Not supported

Item	Specification
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 6$ kV
Power supply surge protection [kV]	Power adapter: $\pm 6$ kV in differential mode and $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.23.2 S5731-L4T2S-RUA

### Overview

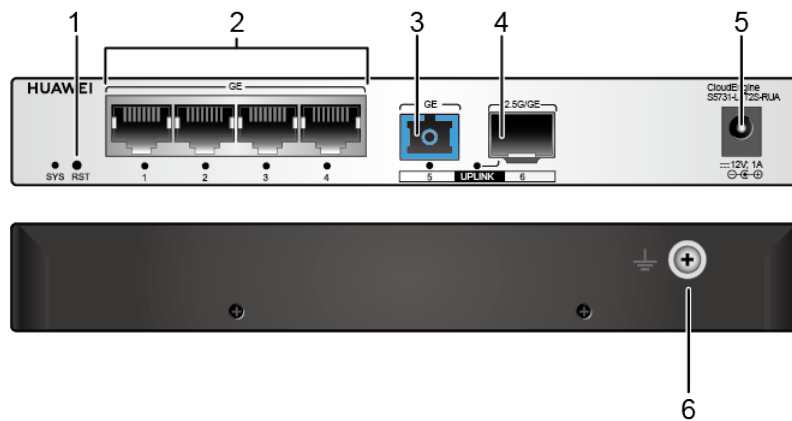
**Table 4-1126** Basic information about the S5731-L4T2S-RUA

Item	Details
Description	S5731-L4T2S-RUA (4*10/100/1000BASE-T ports, 1*GE SFP port, 1*GE port with an SC connector, TX1310 nm/RX1490 nm, AC power, power adapter)
Part Number	98011768
Model	S5731-L4T2S-RUA
First supported version	V200R021C10SPC500 V600R022C10

Item	Details
Remarks	The RU itself does not have a software version. Instead, the first supported version of the RU depends on the software version of the central switch and varies for central switches running V200 and V600.

## Components

Figure 4-455 S5731-L4T2S-RUA appearance



1	One RST button <b>NOTICE</b> To reset the device, press and hold down the button for less than 6s.	2	Four 10/100/1000BASE-T ports
3	One GE optical port <b>NOTE</b> The port is an uplink port. The port has a built-in single-fiber bidirectional optical module by default and cannot be removed.	4	One GE/2.5GE optical port <b>NOTE</b> The port is an uplink port. The 2.5GE rate is supported in V200R023C00 or V600R023C00 and later versions.
5	Power adapter socket <b>NOTE</b> Use the power adapter (12 V, 1 A) delivered with the device.	6	Ground screw

## Ports

**Table 4-1127** Ports on the S5731-L4T2S-RUA

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>
GE/2.5GE optical port	SFP	A GE/2.5GE optical port can send and receive data at 1000 Mbit/s or 2.5 Gbit/s.	<ul style="list-style-type: none"><li>• <b>GE eSFP optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li><li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li></ul>

Port	Connector Type	Description	Available Components
GE optical port	SC	<p>A GE optical port can send and receive data at 1000 Mbit/s.</p> <p>The port has a built-in single-fiber bidirectional optical module by default and cannot be removed.</p> <p>Specifications of the built-in optical module: The rate is GE, the center wavelength is TX1310 nm or RX1490 nm, the connector type is SC, and the maximum transmission distance is 10 km.</p> <p>Only the SFP-GE-LX-SM1490-BIDI (RX1310nm/TX1490nm) optical module can be used on the peer port.</p>	-

## Indicators and Buttons

The S5731-L4T2S-RUA has similar indicators to those on the S5731-L8P2HT-RUA except that the S5731-L4T2S-RUA does not have PoE indicators. For details, see the S5731-L8P2HT-RUA.

## Power Supply System

The remote unit is powered by the power adapter delivered with the device.

## Heat Dissipation System

The remote unit has no fans and uses natural heat dissipation.



## Technical Specifications

**Table 4-1128** Technical specifications of the S5731-L4T2S-RUA

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 27.0 mm x 185.0 mm x 115.0 mm (1.06 in. x 7.28 in. x 4.53 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 27.0 mm x 185.0 mm x 115.0 mm (1.06 in. x 7.28 in. x 4.53 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	82.0 mm x 342.0 mm x 228.0 mm (3.23 in. x 13.46 in. x 8.98 in.)
Chassis height [U]	0.61 U
Weight without packaging [kg(lb)]	0.72 kg (1.59 lb)
Weight with packaging [kg(lb)]	1.02 kg (2.25 lb)
Typical power consumption [W]	4.88 W (device) 5.08 W (device + power adapter)
Typical heat dissipation [BTU/hour]	16.65 (device) 17.33 (device + power adapter)
Maximum power consumption [W]	5.06 W (device) 5.26 W (device + power adapter)
Maximum heat dissipation [BTU/hour]	17.27 (device) 19.75 (device + power adapter)
Static power consumption [W]	2.62 W
MTBF [years]	83.23 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans): < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans): < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0

Item	Specification
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5905.44-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (721.78 ft.). The device cannot start when the temperature is lower than 0°C (32°F). The operating temperature of a device ranges from -5°C to +45°C (23°F to 113°F) when the device uses the following optical modules: - GE optical modules with a transmission distance of less than or equal to 10 km
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Power adapter
Rated input voltage [V]	Power adapter input: 100-240 V AC; 50/60 Hz Power adapter output: 12 V DC
Input voltage range [V]	Power adapter input: 90-290 V AC; 47-63 Hz
Maximum input current [A]	1 A
Memory	--
Flash memory	--
Console port	Not supported
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ±6 kV

Item	Specification
Power supply surge protection [kV]	Power adapter: $\pm 6$ kV in differential mode and $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.23.3 S5731-L4T2ST-RUA

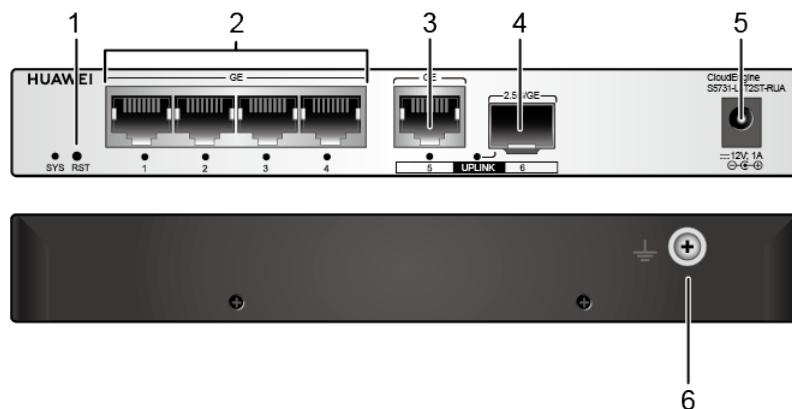
#### Overview

**Table 4-1129** Basic information about the S5731-L4T2ST-RUA

Item	Details
Description	S5731-L4T2ST-RUA (4*10/100/1000BASE-T ports, 1*GE SFP port, 1*10/100/1000BASE-T port, AC power, power adapter)
Part Number	98011770
Model	S5731-L4T2ST-RUA
First supported version	V200R021C10SPC500 V600R022C10
Remarks	The RU itself does not have a software version. Instead, the first supported version of the RU depends on the software version of the central switch and varies for central switches running V200 and V600.

## Components

Figure 4-456 S5731-L4T2ST-RUA appearance



1	<p>One RST button</p> <p><b>NOTICE</b></p> <p>To reset the device, press and hold down the button for less than 6s.</p>	2	<p>Four 10/100/1000BASE-T ports</p>
3	<p>One 10/100/1000BASE-T port</p> <p><b>NOTE</b></p> <p>The port is an uplink port.</p>	4	<p>One GE/2.5GE optical port</p> <p><b>NOTE</b></p> <p>The port is an uplink port.</p> <p>The 2.5GE rate is supported in V200R023C00 or V600R023C00 and later versions.</p>
5	<p>Power adapter socket</p> <p><b>NOTE</b></p> <p>Use the power adapter (12 V, 1 A) delivered with the device.</p>	6	<p>Ground screw</p>

## Ports

**Table 4-1130** Ports on the S5731-L4T2ST-RUA

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>
GE/2.5GE optical port	SFP	A GE/2.5GE optical port can send and receive data at 1000 Mbit/s or 2.5 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li> </ul>

## Indicators and Buttons

The S5731-L4T2ST-RUA has similar indicators to those on the S5731-L8P2HT-RUA except that the S5731-L4T2ST-RUA does not have PoE indicators. For details, see the S5731-L8P2HT-RUA.

## Power Supply System

The remote unit is powered by the power adapter delivered with the device.

## Heat Dissipation System

The remote unit has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1131** Technical specifications of the S5731-L4T2ST-RUA

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 27.0 mm x 185.0 mm x 115.0 mm (1.06 in. x 7.28 in. x 4.53 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 27.0 mm x 185.0 mm x 115.0 mm (1.06 in. x 7.28 in. x 4.53 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	82.0 mm x 342.0 mm x 228.0 mm (3.23 in. x 13.46 in. x 8.98 in.)
Chassis height [U]	0.61 U
Weight without packaging [kg(lb)]	0.74 kg (1.63 lb)
Weight with packaging [kg(lb)]	1.02 kg (2.25 lb)
Typical power consumption [W]	4.88 W (device) 5.08 W (device + power adapter)
Typical heat dissipation [BTU/hour]	16.65 (device) 17.33 (device + power adapter)
Maximum power consumption [W]	5.06 W (device) 5.26 W (device + power adapter)
Maximum heat dissipation [BTU/hour]	17.27 (device) 17.95 (device + power adapter)
Static power consumption [W]	2.62 W
MTBF [years]	83.23 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans): < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans): < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0

Item	Specification
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5905.44-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (721.78 ft.). The device cannot start when the temperature is lower than 0°C (32°F). The operating temperature of a device ranges from -5°C to +45°C (23°F to 113°F) when the device uses the following optical modules: - GE optical modules with a transmission distance of less than or equal to 10 km
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Power adapter
Rated input voltage [V]	Power adapter input: 100-240 V AC; 50/60 Hz Power adapter output: 12 V DC
Input voltage range [V]	Power adapter input: 90-290 V AC; 47-63 Hz
Maximum input current [A]	1 A
Memory	--
Flash memory	--
Console port	Not supported
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ±6 kV

Item	Specification
Power supply surge protection [kV]	Power adapter: $\pm 6$ kV in differential mode and $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.23.4 S5731-L4P2S-RUA

### Overview

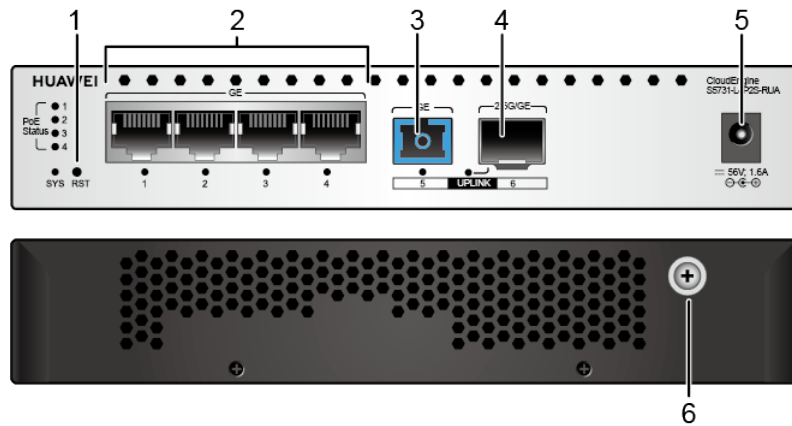
**Table 4-1132** Basic information about the S5731-L4P2S-RUA

Item	Details
Description	S5731-L4P2S-RUA (4*10/100/1000BASE-T ports, PoE++, 1*GE SFP port, 1*GE port with an SC connector, TX1310 nm/RX1490 nm, AC power, power adapter)
Part Number	98011772
Model	S5731-L4P2S-RUA
First supported version	V200R021C10SPC500 V600R022C10
Remarks	The RU itself does not have a software version. Instead, the first supported version of the RU depends on the software version of the central switch and varies for central switches running V200 and V600.



## Components

Figure 4-457 S5731-L4P2S-RUA appearance



1	<p>One RST button</p> <p><b>NOTICE</b></p> <p>To reset the device, press and hold down the button for less than 6s.</p>	2	<p>Four 10/100/1000BASE-T PoE++ ports</p>
3	<p>One GE optical port</p> <p><b>NOTE</b></p> <p>The port is an uplink port.</p> <p>The port has a built-in single-fiber bidirectional optical module by default and cannot be removed.</p>	4	<p>One GE/2.5GE optical port</p> <p><b>NOTE</b></p> <p>The port is an uplink port.</p> <p>The 2.5GE rate is supported in V200R023C00 or V600R023C00 and later versions.</p>
5	<p>Power adapter socket</p> <p><b>NOTE</b></p> <p>Use the power adapter (56 V, 1.6 A) delivered with the device.</p>	6	<p>Ground screw</p>

## Ports

**Table 4-1133** Ports on the S5731-L4P2S-RUA

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE++ port	RJ45	A 10/100/1000BASE-T PoE++ Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	<b>Ethernet cable</b>
GE/2.5GE optical port	SFP	A GE/2.5GE optical port can send and receive data at 1000 Mbit/s or 2.5 Gbit/s.	<ul style="list-style-type: none"><li>• <b>GE eSFP optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li><li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li></ul>

Port	Connector Type	Description	Available Components
GE optical port	SC	<p>A GE optical port can send and receive data at 1000 Mbit/s.</p> <p>The port has a built-in single-fiber bidirectional optical module by default and cannot be removed.</p> <p>Specifications of the built-in optical module: The rate is GE, the center wavelength is TX1310 nm or RX1490 nm, the connector type is SC, and the maximum transmission distance is 10 km.</p> <p>Only the SFP-GE-LX-SM1490-BIDI (RX1310nm/TX1490nm) optical module can be used on the peer port.</p>	-

## Indicators and Buttons

The S5731-L4P2S-RUA has similar indicators to those on the S5731-L8P2HT-RUA. For details, see the S5731-L8P2HT-RUA.

## Power Supply System

The remote unit uses the power adapter delivered with the device to supply power to the remote unit and the connected PDs.

**Table 4-1134** Power supply configurations

Power Module	Available PoE Power	Maximum Number of Ports (Fully Loaded)
External power adapter	77 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 4</li> <li>● 802.3at (30 W per port): 2</li> <li>● 802.3bt (60 W per port): 1</li> </ul>

 **NOTE**

If the power output of the remote unit is manually configured to comply with 802.3at or 802.3af, the PD connected to the remote unit will be power-cycled when the remote unit is reset due to a cause other than power-off.

## Heat Dissipation System

The remote unit has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1135** Technical specifications of the S5731-L4P2S-RUA

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	<p>Basic dimensions (excluding the parts protruding from the body): 38.0 mm x 185.0 mm x 115.0 mm (1.5 in. x 7.28 in. x 4.53 in.)</p> <p>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 38.0 mm x 185.0 mm x 115.0 mm (1.5 in. x 7.28 in. x 4.53 in.)</p>
Dimensions with packaging (H x W x D) [mm(in.)]	82.0 mm x 350.0 mm x 222.0 mm (3.23 in. x 13.78 in. x 8.74 in.)
Chassis height [U]	0.855 U
Weight without packaging [kg(lb)]	1.12 kg (2.47 lb)
Weight with packaging [kg(lb)]	1.46 kg (3.22 lb)
Typical power consumption [W]	6.82 W (device) 8.30 W (device + power adapter)
Typical heat dissipation [BTU/hour]	23.27 (device) 28.32 (device + power adapter)

Item	Specification
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 7.00 W (device)/8.48 W (device + power adapter)</li> <li>Full PoE load: 88.0 W (PoE: 77 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 23.88 (device)/28.94 (device + power adapter)</li> <li>Full PoE load: 300.27</li> </ul>
Static power consumption [W]	4.88 W
MTBF [years]	74.48 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans): < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans): < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5905.44-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (721.78 ft.).</p> <p>The device cannot start when the temperature is lower than 0°C (32°F).</p> <p>The operating temperature of a device ranges from -5°C to +45°C (23°F to 113°F) when the device uses the following optical modules:</p> <ul style="list-style-type: none"> <li>- GE optical modules with a transmission distance of less than or equal to 10 km</li> </ul>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)

Item	Specification
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Power adapter
Rated input voltage [V]	Power adapter input: 100–240 V AC; 50/60 Hz Power adapter output: 56 V DC
Input voltage range [V]	Power adapter input: 90–290 V AC; 47–63 Hz
Maximum input current [A]	1.6 A
Memory	--
Flash memory	--
Console port	Not supported
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 6$ kV
Power supply surge protection [kV]	Power adapter: $\pm 6$ kV in differential mode and $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.23.5 S5731-L4P2ST-RUA

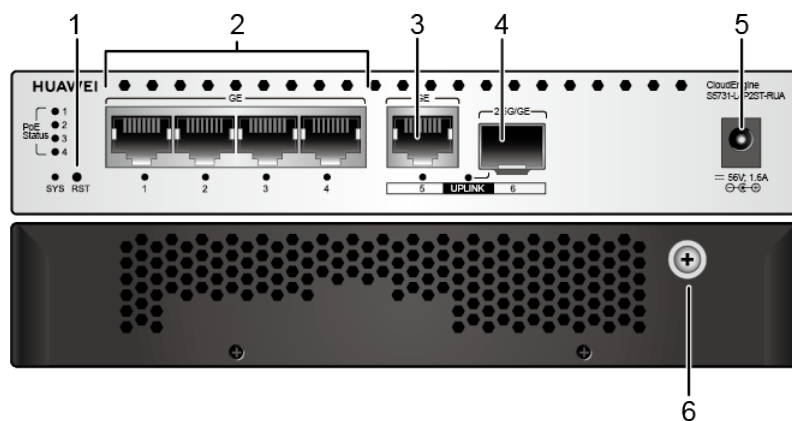
## Overview

**Table 4-1136** Basic information about the S5731-L4P2ST-RUA

Item	Details
Description	S5731-L4P2ST-RUA (4*10/100/1000BASE-T ports, PoE++, 1*GE SFP port, 1*10/100/1000BASE-T port, AC power, power adapter)
Part Number	98011774
Model	S5731-L4P2ST-RUA
First supported version	V200R021C10SPC500 V600R022C10
Remarks	The RU itself does not have a software version. Instead, the first supported version of the RU depends on the software version of the central switch and varies for central switches running V200 and V600.

## Components

**Figure 4-458** S5731-L4P2ST-RUA appearance



1	One RST button <b>NOTICE</b> To reset the device, press and hold down the button for less than 6s.	2	Four 10/100/1000BASE-T PoE++ ports
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3	One 10/100/1000BASE-T port <b>NOTE</b> The port is an uplink port.	4	One GE/2.5GE optical port <b>NOTE</b> The port is an uplink port. The 2.5GE rate is supported in V200R023C00 or V600R023C00 and later versions.
5	Power adapter socket <b>NOTE</b> Use the power adapter (56 V, 1.6 A) delivered with the device.	6	Ground screw

## Ports

**Table 4-1137** Ports on the S5731-L4P2ST-RUA

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE++ port	RJ45	A 10/100/1000BASE-T PoE++ Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	<a href="#">Ethernet cable</a>
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>



Port	Connector Type	Description	Available Components
GE/2.5GE optical port	SFP	A GE/2.5GE optical port can send and receive data at 1000 Mbit/s or 2.5 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li> </ul>

## Indicators and Buttons

The S5731-L4P2ST-RUA has similar indicators to those on the S5731-L8P2HT-RUA. For details, see the S5731-L8P2HT-RUA.

## Power Supply System

The remote unit uses the power adapter delivered with the device to supply power to the remote unit and the connected PDs.

**Table 4-1138** Power supply configurations

Power Module	Available PoE Power	Maximum Number of Ports (Fully Loaded)
External power adapter	77 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 4</li> <li>• 802.3at (30 W per port): 2</li> <li>• 802.3bt (60 W per port): 1</li> </ul>

### NOTE

If the power output of the remote unit is manually configured to comply with 802.3at or 802.3af, the PD connected to the remote unit will be power-cycled when the remote unit is reset due to a cause other than power-off.

## Heat Dissipation System

The remote unit has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1139** Technical specifications of the S5731-L4P2ST-RUA

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 38.0 mm x 185.0 mm x 115.0 mm (1.5 in. x 7.28 in. x 4.53 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 38.0 mm x 185.0 mm x 115.0 mm (1.5 in. x 7.28 in. x 4.53 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	82.0 mm x 350.0 mm x 222.0 mm (3.23 in. x 13.78 in. x 8.74 in.)
Chassis height [U]	0.855 U
Weight without packaging [kg(lb)]	1.14 kg (2.51 lb)
Weight with packaging [kg(lb)]	1.46 kg (3.22 lb)
Typical power consumption [W]	6.80 W (device) 7.68 W (device + power adapter)
Typical heat dissipation [BTU/hour]	23.20 (device) 26.21 (device + power adapter)
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 7.00 W (device)/7.88 W (device + power adapter)</li> <li>Full PoE load: 88.0 W (PoE: 77 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 23.88 (device)/26.89 (device + power adapter)</li> <li>Full PoE load: 300.27</li> </ul>
Static power consumption [W]	4.68 W
MTBF [years]	78.74 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans): < 30

Item	Specification
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans): < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5905.44-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (721.78 ft.). The device cannot start when the temperature is lower than 0°C (32°F). The operating temperature of a device ranges from -5°C to +45°C (23°F to 113°F) when the device uses the following optical modules: - GE optical modules with a transmission distance of less than or equal to 10 km
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Power adapter
Rated input voltage [V]	Power adapter input: 100-240 V AC; 50/60 Hz Power adapter output: 56 V DC
Input voltage range [V]	Power adapter input: 90-290 V AC; 47-63 Hz
Maximum input current [A]	1.6 A
Memory	--
Flash memory	--
Console port	Not supported

Item	Specification
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 6$ kV
Power supply surge protection [kV]	Power adapter: $\pm 6$ kV in differential mode and $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.23.6 S5731-L4P2HT-RUA

### Overview

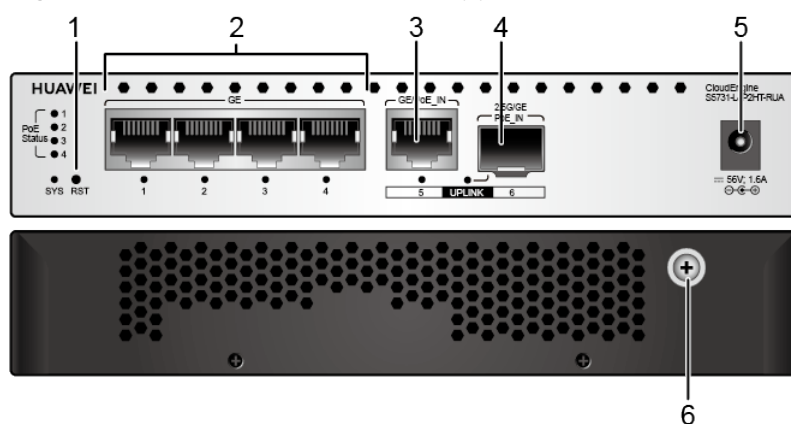
**Table 4-1140** Basic information about the S5731-L4P2HT-RUA

Item	Details
Description	S5731-L4P2HT-RUA (4*10/100/1000BASE-T ports, PoE++, 1*GE hybrid optical-electrical SFP port, 1*10/100/1000BASE-T port, PoE input)
Part Number	98011776
Model	S5731-L4P2HT-RUA
First supported version	V200R021C10SPC500 V600R022C10

Item	Details
Remarks	The RU itself does not have a software version. Instead, the first supported version of the RU depends on the software version of the central switch and varies for central switches running V200 and V600.

## Components

Figure 4-459 S5731-L4P2HT-RUA appearance



1	One RST button  <b>NOTICE</b> To reset the device, press and hold down the button for less than 6s.	2	Four 10/100/1000BASE-T PoE++ ports
3	One 10/100/1000BASE-T port  <b>NOTE</b> The port is an uplink port. The port can receive PoE power from a central switch through an Ethernet cable or the first-generation hybrid cable.	4	One GE/2.5GE hybrid optical-electrical port  <b>NOTE</b> The port is an uplink port. The 2.5GE rate is supported in V200R023C00 or V600R023C00 and later versions. The port can receive PoE power from a central switch through the second-generation hybrid cable. When using a hybrid cable to receive power, you must use the pigtails or jumpers and hybrid modules matching the second-generation hybrid cable.

5	Power adapter socket  <b>NOTE</b> The power adapter is not delivered with the device by default and can be purchased separately (part number: 02221024).	6	Ground screw
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## Ports

**Table 4-1141** Ports on the S5731-L4P2HT-RUA

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE++ port	RJ45	A 10/100/1000BASE-T PoE++ Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.  The port supports the PoE function.	<a href="#">Ethernet cable</a>
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.  It can receive PoE power from a central switch through an Ethernet cable.	<ul style="list-style-type: none"> <li>• <a href="#">Ethernet cable</a></li> <li>• <a href="#">First-generation hybrid cable</a></li> </ul>

Port	Connector Type	Description	Available Components
GE/2.5GE hybrid optical-electrical port	SFP	A GE/2.5GE hybrid optical-electrical port can send and receive data at 1000 Mbit/s or 2.5 Gbit/s. It can receive PoE power from a central switch through a hybrid cable.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li> <li>• <b>GE SFP Hybrid Modules</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li> <li>• <b>2.5GE eSFP Hybrid Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li> <li>• <b>First-generation hybrid cable</b></li> <li>• <b>Second-generation hybrid cable</b></li> </ul>

## Indicators and Buttons

The S5731-L4P2HT-RUA has similar indicators to those on the S5731-L8P2HT-RUA. For details, see the S5731-L8P2HT-RUA.

## Power Supply System

The remote unit supports the following power supply modes:

- Powered by an external power adapter (separately purchased)
- Powered by a central switch using an Ethernet cable of Cat5e or higher category (occupies the uplink electrical port, which is used for both PoE power input and data transmission)
- Powered by a central switch using the second-generation hybrid cable (occupies the uplink hybrid optical-electrical port, which is used for both PoE power input and data transmission)
- Powered by a central switch using the first-generation hybrid cable (occupies the uplink electrical port and uplink hybrid optical-electrical port. The uplink electrical port is used for PoE power input, and the uplink hybrid optical-electrical port is used for data transmission.)

When different power supply modes are used at the same time, the system preferentially uses the power adapter for power supply. The cold backup mode is used between different power supply modes and cannot supply power to the remote unit at the same time. The two uplink ports have no default priority, and the connection time is used as the priority.

The remote unit can provide PoE power for external PDs. The PoE power supply capability varies according to the power supply mode.

**Table 4-1142** Power supply configurations

Power Supply Mode	Available PoE Power	Maximum Number of Ports (Fully Loaded)	Remark
Powered by an external power adapter	77 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 4</li> <li>• 802.3at (30 W per port): 2</li> <li>• 802.3bt (60 W per port): 1</li> </ul>	-
Powered by a central switch	Forcible power supply disabled (default): max 60 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 3</li> <li>• 802.3at (30 W per port): 2</li> <li>• 802.3bt (60 W per port): 1</li> </ul>	<ul style="list-style-type: none"> <li>• If no PD is connected to the remote unit, the central switch only supplies power to the remote unit. The PoE standard of the central switch must be 802.3at at least.</li> <li>• If PDs are connected to the remote unit, the central switch supplies power to the remote unit and the connected PDs. It is recommended that the output PoE standard of the</li> </ul>



Power Supply Mode	Available PoE Power	Maximum Number of Ports (Fully Loaded)	Remark
	Forcible power supply enabled: max 83 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 4</li> <li>802.3at (30 W per port): 2</li> <li>802.3bt (60 W per port): 1</li> </ul>	central switch be 802.3bt and the output power be 90 W. If the 802.3at standard is used, the available power of the PDs connected to the remote unit may be insufficient.

#### NOTICE

When the remote unit is powered by the central switch, the total power consumption of the remote unit and its connected PDs cannot exceed 71.3 W. If the power consumption exceeds 71.3 W, the remote unit and its connected PDs will be powered off and restarted.

When the remote unit is powered by the central switch, the maximum available PoE power in the preceding table can be provided only when the following conditions are met:

- When forcible power supply is disabled by default:
  - The PoE output of the central switch must comply with the 802.3bt class8 standard.
- When forcible power supply is enabled (using the **poE force-power port** command):
  - The PoE output of the central switch must comply with the 802.3bt class8 standard.
  - The central switch and the remote unit must be connected for a short distance (less than 8 m, with the line loss ignored). If the distance between the central switch and the remote unit is longer than 8 m and the PD is supplied with power based on the maximum power supply capability displayed on the central switch, the remote unit and the connected PD may be powered off and restarted.
  - The output voltage of the power module used by the central switch cannot be lower than 55.5 V.

The actual available PoE power provided by the remote unit is calculated based on the cabling distance between the central switch and the remote unit, the cabling distance between the remote unit and the connected PD, the maximum power consumption of the remote unit, the PoE output voltage of the central switch, and PoE class level output by the central switch.

If the power output of the remote unit is manually configured to comply with 802.3at or 802.3af, the PD connected to the remote unit will be power-cycled when the remote unit is reset due to a cause other than power-off.

## Heat Dissipation System

The remote unit has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1143** Technical specifications of the S5731-L4P2HT-RUA

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 38.0 mm x 185.0 mm x 115.0 mm (1.5 in. x 7.28 in. x 4.53 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 38.0 mm x 185.0 mm x 115.0 mm (1.5 in. x 7.28 in. x 4.53 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	82.0 mm x 270.0 mm x 178.0 mm (3.23 in. x 10.63 in. x 7.01 in.)
Chassis height [U]	0.855 U
Weight without packaging [kg(lb)]	0.60 kg (1.32 lb)
Weight with packaging [kg(lb)]	0.81 kg (1.79 lb)
Typical power consumption [W]	6.82 W (device) 8.30 W (device + power adapter)
Typical heat dissipation [BTU/hour]	23.27 (device) 28.32 (device + power adapter)
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 7.00 W (device)/8.48 W (device + power adapter)</li> <li>Full PoE load: 88.0 W (PoE: 77 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 23.88 (device)/28.94 (device + power adapter)</li> <li>Full PoE load: 300.265</li> </ul>
Static power consumption [W]	4.88 W
MTBF [years]	73.98 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans): < 30

Item	Specification
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans): < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Cold backup of uplink hybrid optical-electrical ports or electrical ports and power adapters, cold backup of uplink hybrid optical-electrical ports and electrical ports, and preferential power supply by power adapters (By default, no power adapter is provided, and the power adapter 02221024 can be used.)
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5905.44-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (721.78 ft.).</p> <p>The device cannot start when the temperature is lower than 0°C (32°F).</p> <p>The operating temperature of a device ranges from -5°C to +45°C (23°F to 113°F) when the device uses the following optical modules:</p> <ul style="list-style-type: none"> <li>- GE optical modules with a transmission distance of less than or equal to 10 km</li> </ul>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	<ul style="list-style-type: none"> <li>• Power adapter</li> <li>• PoE_IN</li> </ul>
Rated input voltage [V]	Power adapter input: 100-240 V AC; 50/60 Hz PoE input: 56 V DC

Item	Specification
Input voltage range [V]	Power adapter input: 90–290 V AC; 47–63 Hz PoE input: 54–57 V DC
Maximum input current [A]	1.8 A
Memory	--
Flash memory	--
Console port	Not supported
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 6$ kV
Power supply surge protection [kV]	Power adapter: $\pm 6$ kV in differential mode and $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.23.7 S5731-L8T2ST-RUA

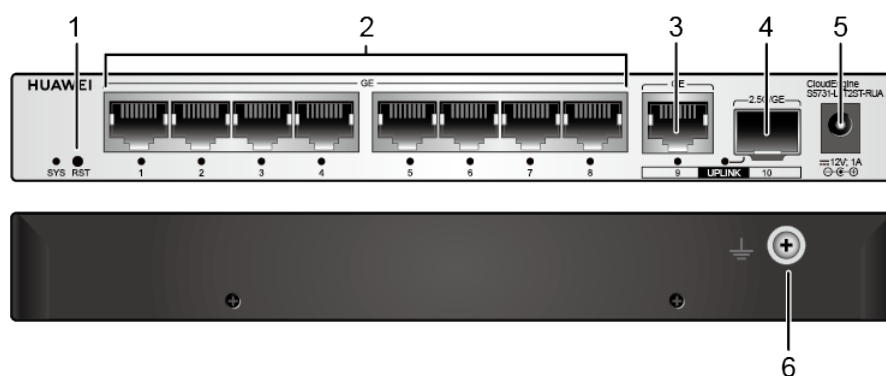
## Overview

**Table 4-1144** Basic information about the S5731-L8T2ST-RUA

Item	Details
Description	S5731-L8T2ST-RUA (8*10/100/1000BASE-T ports, 1*GE SFP port, 1*10/100/1000BASE-T port, AC power, power adapter)
Part Number	98011778
Model	S5731-L8T2ST-RUA
First supported version	V200R021C10SPC500 V600R022C10
Remarks	The RU itself does not have a software version. Instead, the first supported version of the RU depends on the software version of the central switch and varies for central switches running V200 and V600.

## Components

**Figure 4-460** S5731-L8T2ST-RUA appearance



1	One RST button <b>NOTICE</b> To reset the device, press and hold down the button for less than 6s.	2	Eight 10/100/1000BASE-T ports
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3	One 10/100/1000BASE-T port <b>NOTE</b> The port is an uplink port.	4	One GE/2.5GE optical port <b>NOTE</b> The port is an uplink port. The 2.5GE rate is supported in V200R023C00 or V600R023C00 and later versions.
5	Power adapter socket <b>NOTE</b> Use the power adapter (12 V, 1 A) delivered with the device.	6	Ground screw

## Ports

**Table 4-1145** Ports on the S5731-L8T2ST-RUA

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>
GE/2.5GE optical port	SFP	A GE/2.5GE optical port can send and receive data at 1000 Mbit/s or 2.5 Gbit/s.	<ul style="list-style-type: none"> <li><b>GE eSFP optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li> <li><b>2.5GE eSFP Optical Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li> </ul>

## Indicators and Buttons

The S5731-L8T2ST-RUA has similar indicators to those on the S5731-L8P2HT-RUA except that the S5731-L8T2ST-RUA does not have PoE indicators. For details, see the S5731-L8P2HT-RUA.

## Power Supply System

The remote unit is powered by the power adapter delivered with the device.

## Heat Dissipation System

The remote unit has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1146** Technical specifications of the S5731-L8T2ST-RUA

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 27.0 mm x 210.0 mm x 130.0 mm (1.06 in. x 8.27 in. x 5.12 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 27.0 mm x 210.0 mm x 130.0 mm (1.06 in. x 8.27 in. x 5.12 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	82.0 mm x 347.0 mm x 242.0 mm (3.23 in. x 13.66 in. x 9.53 in.)
Chassis height [U]	0.61 U
Weight without packaging [kg(lb)]	0.84 kg (1.85 lb)
Weight with packaging [kg(lb)]	1.14 kg (2.51 lb)
Typical power consumption [W]	7.73 W (device) 7.98 W (device + power adapter)
Typical heat dissipation [BTU/hour]	26.38 (device) 27.23 (device + power adapter)
Maximum power consumption [W]	7.86 W (device) 8.11 W (device + power adapter)
Maximum heat dissipation [BTU/hour]	26.82 (device) 27.67 (device + power adapter)
Static power consumption [W]	3.23 W
MTBF [years]	84.79 years

Item	Specification
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans): < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans): < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5905.44-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (721.78 ft.). The device cannot start when the temperature is lower than 0°C (32°F). The operating temperature of a device ranges from -5°C to +45°C (23°F to 113°F) when the device uses the following optical modules: - GE optical modules with a transmission distance of less than or equal to 10 km
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Power adapter
Rated input voltage [V]	Power adapter input: 100-240 V AC; 50/60 Hz Power adapter output: 12 V DC
Input voltage range [V]	Power adapter input: 90-290 V AC; 47-63 Hz



Item	Specification
Maximum input current [A]	1 A
Memory	--
Flash memory	--
Console port	Not supported
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 6$ kV
Power supply surge protection [kV]	Power adapter: $\pm 6$ kV in differential mode and $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.23.8 S5731-L8P2ST-RUA

### Overview

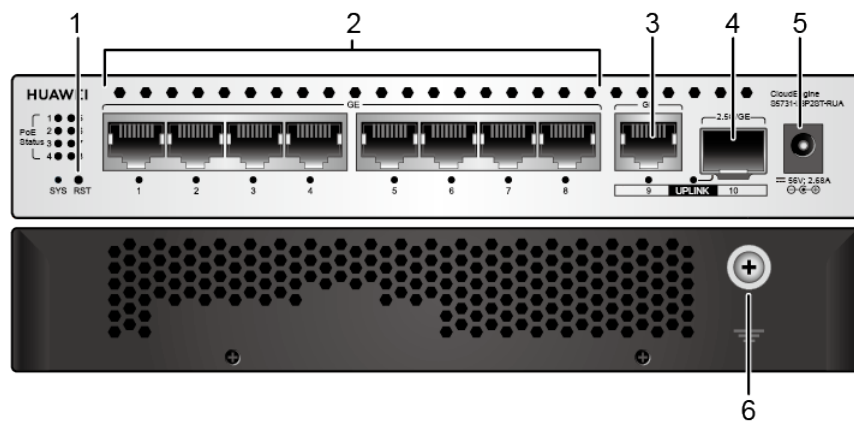
**Table 4-1147** Basic information about the S5731-L8P2ST-RUA

Item	Details
Description	S5731-L8P2ST-RUA (8*10/100/1000BASE-T ports, PoE+, 1*GE SFP port, 1*10/100/1000BASE-T port, AC power, power adapter)
Part Number	98011780
Model	S5731-L8P2ST-RUA

Item	Details
First supported version	V200R021C10SPC500 V600R022C10
Remarks	The RU itself does not have a software version. Instead, the first supported version of the RU depends on the software version of the central switch and varies for central switches running V200 and V600.

## Components

Figure 4-461 S5731-L8P2ST-RUA appearance



1	One RST button <b>NOTICE</b> To reset the device, press and hold down the button for less than 6s.	2	Eight 10/100/1000BASE-T PoE+ ports
3	One 10/100/1000BASE-T port <b>NOTE</b> The port is an uplink port.	4	One GE/2.5GE optical port <b>NOTE</b> The port is an uplink port. The 2.5GE rate is supported in V200R023C00 or V600R023C00 and later versions.
5	Power adapter socket <b>NOTE</b> Use the power adapter (56 V, 2.68 A) delivered with the device.	6	Ground screw

## Ports

**Table 4-1148** Ports on the S5731-L8P2ST-RUA

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T PoE+ Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	<b>Ethernet cable</b>
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>
GE/2.5GE optical port	SFP	A GE/2.5GE optical port can send and receive data at 1000 Mbit/s or 2.5 Gbit/s.	<ul style="list-style-type: none"><li>• <b>GE eSFP optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li><li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li></ul>

## Indicators and Buttons

The S5731-L8P2ST-RUA has similar indicators to those on the S5731-L8P2HT-RUA. For details, see the S5731-L8P2HT-RUA.

## Power Supply System

The remote unit uses the power adapter delivered with the device to supply power to the remote unit and the connected PDs.

**Table 4-1149** Power supply configurations

Power Supply Mode	Available PoE Power	Maximum Number of Ports (Fully Loaded)
External power adapter	131 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 8</li> <li>802.3at (30 W per port): 4</li> </ul>

## Heat Dissipation System

The remote unit has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1150** Technical specifications of the S5731-L8P2ST-RUA

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	<p>Basic dimensions (excluding the parts protruding from the body): 38.0 mm x 210.0 mm x 130.0 mm (1.5 in. x 8.27 in. x 5.12 in.)</p> <p>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 38.0 mm x 210.0 mm x 130.0 mm (1.5 in. x 8.27 in. x 5.12 in.)</p>
Dimensions with packaging (H x W x D) [mm(in.)]	82.0 mm x 375.0 mm x 242.0 mm (3.23 in. x 14.76 in. x 9.53 in.)
Chassis height [U]	0.855 U
Weight without packaging [kg(lb)]	1.59 kg (3.51 lb)
Weight with packaging [kg(lb)]	1.98 kg (4.37 lb)
Typical power consumption [W]	<p>9.69 W (device)</p> <p>11.36 W (device + power adapter)</p>

Item	Specification
Typical heat dissipation [BTU/hour]	33.06 (device) 38.76 (device + power adapter)
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 10.0 W (device)/11.67 W (device + power adapter)</li> <li>Full PoE load: 146.0 W (PoE: 131 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 34.12 (device)/39.82 (device + power adapter)</li> <li>Full PoE load: 498.17</li> </ul>
Static power consumption [W]	6.48 W
MTBF [years]	75.78 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans): < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans): < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5905.44-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (721.78 ft.).</p> <p>The device cannot start when the temperature is lower than 0°C (32°F).</p> <p>The operating temperature of a device ranges from -5°C to +45°C (23°F to 113°F) when the device uses the following optical modules:</p> <ul style="list-style-type: none"> <li>- GE optical modules with a transmission distance of less than or equal to 10 km</li> </ul>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)

Item	Specification
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Power adapter
Rated input voltage [V]	Power adapter input: 100-240 V AC; 50/60 Hz Power adapter output: 56 V DC
Input voltage range [V]	Power adapter input: 90-290 V AC; 47-63 Hz
Maximum input current [A]	2.68 A
Memory	--
Flash memory	--
Console port	Not supported
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 6$ kV
Power supply surge protection [kV]	Power adapter: $\pm 6$ kV in differential mode and $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.23.9 S5731-L8P2HT-RUA

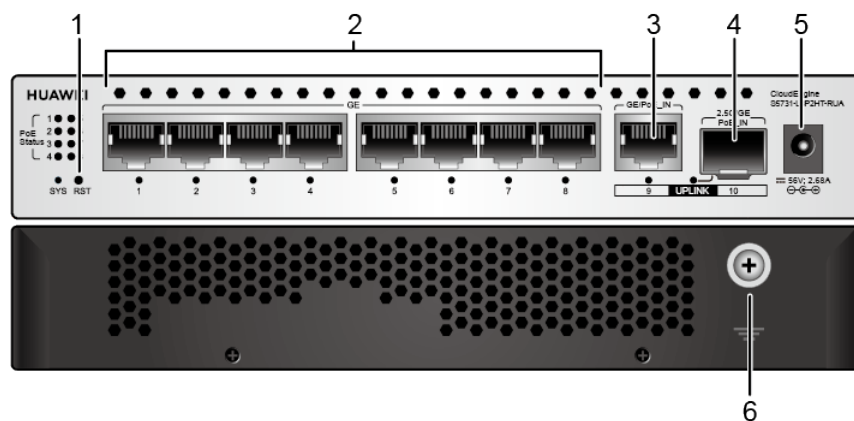
## Overview

**Table 4-1151** Basic information about the S5731-L8P2HT-RUA

Item	Details
Description	S5731-L8P2HT-RUA (8*10/100/1000BASE-T ports, PoE+, 1*GE hybrid optical-electrical SFP port, 1*10/100/1000BASE-T port, PoE input)
Part Number	98011782
Model	S5731-L8P2HT-RUA
First supported version	V200R021C10SPC500 V600R022C10
Remarks	The RU itself does not have a software version. Instead, the first supported version of the RU depends on the software version of the central switch and varies for central switches running V200 and V600.

## Components

**Figure 4-462** S5731-L8P2HT-RUA appearance



1	One RST button  <b>NOTICE</b> To reset the device, press and hold down the button for less than 6s.	2	Eight 10/100/1000BASE-T PoE+ ports
---	--	---	------------------------------------

3	<p>One 10/100/1000BASE-T port</p> <p><b>NOTE</b></p> <p>The port is an uplink port.</p> <p>The port can receive PoE power from a central switch through an Ethernet cable or the first-generation hybrid cable.</p>	4	<p>One GE/2.5GE hybrid optical-electrical port</p> <p><b>NOTE</b></p> <p>The port is an uplink port.</p> <p>The 2.5GE rate is supported in V200R023C00 or V600R023C00 and later versions.</p> <p>The port can receive PoE power from a central switch through the second-generation hybrid cable.</p> <p>When using a hybrid cable to receive power, you must use the pigtailed or jumpers and hybrid modules matching the second-generation hybrid cable.</p>
5	<p>Power adapter socket</p> <p><b>NOTE</b></p> <p>The power adapter is not delivered with the device by default and can be purchased separately (part number: 02221024).</p>	6	<p>Ground screw</p>

## Ports

**Table 4-1152** Ports on the S5731-L8P2HT-RUA

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	<p>A 10/100/1000BASE-T PoE+ Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.</p> <p>The port supports the PoE function.</p>	<p><b>Ethernet cable</b></p>

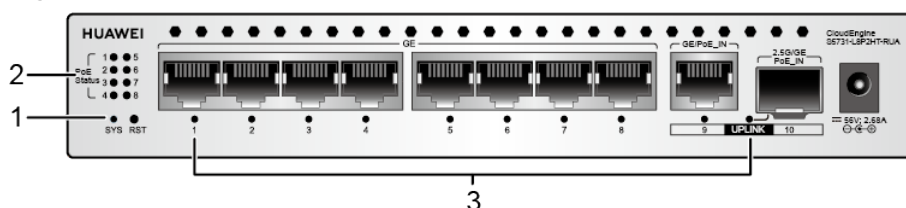


Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. It can receive PoE power from a central switch through an Ethernet cable.	<ul style="list-style-type: none"> <li>• <a href="#">Ethernet cable</a></li> <li>• <a href="#">First-generation hybrid cable</a></li> </ul>

Port	Connector Type	Description	Available Components
GE/2.5GE hybrid optical-electrical port	SFP	A GE/2.5GE hybrid optical-electrical port can send and receive data at 1000 Mbit/s or 2.5 Gbit/s. It can receive PoE power from a central switch through a hybrid cable.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li> <li>• <b>GE SFP Hybrid Modules</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li> <li>• <b>2.5GE eSFP Hybrid Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li> <li>• <b>First-generation hybrid cable</b></li> <li>• <b>Second-generation hybrid cable</b></li> </ul>

## Indicators and Buttons

Figure 4-463 Indicators on the S5731-L8P2HT-RUA



**Table 4-1153** Description of indicators on the device

No.	Indicator	Name	Color	Status	Description
1	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
2	PoE STATUS	PoE status indicator	-	Off	The port is connected to a non-PD device or is not supplying PoE power.
			Yellow	Steady on	The port is supplying power to the connected PD.
			Yellow	Blinking	The port is connected to a non-standard PD that can be powered by the port. You can change the power supply mode of the port to force-power so that it can provide power to the PD.  The PoE power of the switch is insufficient, and the port cannot provide power to the PD.
3	1-10	Service port indicator	-	Off	The port is not connected.
			Green	Steady on	The port is connected.
			Green	Blinking	The port is sending or receiving data.

## Power Supply System

The remote unit supports the following power supply modes:

- Powered by an external power adapter (separately purchased)
- Powered by a central switch using an Ethernet cable of Cat5e or higher category (occupies the uplink electrical port, which is used for both PoE power input and data transmission)
- Powered by a central switch using the second-generation hybrid cable (occupies the uplink hybrid optical-electrical port, which is used for both PoE power input and data transmission)
- Powered by a central switch using the first-generation hybrid cable (occupies the uplink electrical port and uplink hybrid optical-electrical port. The uplink electrical port is used for PoE power input, and the uplink hybrid optical-electrical port is used for data transmission.)

When different power supply modes are used at the same time, the system preferentially uses the power adapter for power supply. The cold backup mode is used between different power supply modes and cannot supply power to the remote unit at the same time. The two uplink ports have no default priority, and the connection time is used as the priority.

The remote unit can provide PoE power for external PDs. The PoE power supply capability varies according to the power supply mode.

**Table 4-1154** Power supply configurations

Power Supply Mode	Available PoE Power	Maximum Number of Ports (Fully Loaded)	Remark
Powered by an external power adapter	131 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 8</li> <li>802.3at (30 W per port): 4</li> </ul>	-
Powered by a central switch	Forcible power supply disabled (default): max 57 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 3</li> <li>802.3at (30 W per port): 1</li> </ul>	<ul style="list-style-type: none"> <li>If no PD is connected to the remote unit, the central switch only supplies power to the remote unit. The PoE standard of the central switch must be 802.3at at least.</li> <li>If PDs are connected to the remote unit, the central switch supplies power to the remote unit and the connected PDs. It is recommended that the output PoE standard of the central switch be 802.3bt and the output power be 90 W. If the 802.3at standard is used, the available power of the PDs connected to the remote unit may be insufficient.</li> </ul>
	Enable forcible power supply: max 80 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 5</li> <li>802.3at (30 W per port): 2</li> </ul>	

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### NOTICE

When the remote unit is powered by the central switch, the total power consumption of the remote unit and its connected PDs cannot exceed 71.3 W. If the power consumption exceeds 71.3 W, the remote unit and its connected PDs will be powered off and restarted.

When the remote unit is powered by the central switch, the maximum available PoE power in the preceding table can be provided only when the following conditions are met:

- When forcible power supply is disabled by default:
  - The PoE output of the central switch must comply with the 802.3bt class8 standard.
- When forcible power supply is enabled (using the **poE force-power port** command):
  - The PoE output of the central switch must comply with the 802.3bt class8 standard.
  - The central switch and the remote unit must be connected for a short distance (less than 8 m, with the line loss ignored). If the distance between the central switch and the remote unit is longer than 8 m and the PD is supplied with power based on the maximum power supply capability displayed on the central switch, the remote unit and the connected PD may be powered off and restarted.
  - The output voltage of the power module used by the central switch cannot be lower than 55.5 V.

The actual available PoE power provided by the remote unit is calculated based on the cabling distance between the central switch and the remote unit, the cabling distance between the remote unit and the connected PD, the maximum power consumption of the remote unit, the PoE output voltage of the central switch, and PoE class level output by the central switch.

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## Heat Dissipation System

The remote unit has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1155** Technical specifications of the S5731-L8P2HT-RUA

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 38.0 mm x 210.0 mm x 130.0 mm (1.5 in. x 8.27 in. x 5.12 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 38.0 mm x 210.0 mm x 130.0 mm (1.5 in. x 8.27 in. x 5.12 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	82.0 mm x 275.0 mm x 196.0 mm (3.23 in. x 10.83 in. x 7.72 in.)
Chassis height [U]	0.855 U
Weight without packaging [kg(lb)]	0.75 kg (1.65 lb)
Weight with packaging [kg(lb)]	0.94 kg (2.07 lb)
Typical power consumption [W]	8.82 W (device) 10.82 W (device + power adapter)
Typical heat dissipation [BTU/hour]	30.09 (device) 36.92 (device + power adapter)
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>• Without PoE: 9.60 W (device)/11.60 W (device + power adapter)</li> <li>• Full PoE load: 146 W (PoE: 131 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>• Without PoE: 32.76 (device)/39.58 (device + power adapter)</li> <li>• Full PoE load: 498.17</li> </ul>
Static power consumption [W]	5.6 W
MTBF [years]	71.36 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans): < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans): < 20
Number of card slots	0
Number of power slots	0

Item	Specification
Number of fans modules	0
Redundant power supply	Cold backup of uplink hybrid optical-electrical ports or electrical ports and power adapters, cold backup of uplink hybrid optical-electrical ports and electrical ports, and preferential power supply by power adapters (By default, no power adapter is provided, and the power adapter 02221024 can be used.)
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5905.44-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (721.78 ft.). The device cannot start when the temperature is lower than 0°C (32°F). The operating temperature of a device ranges from -5°C to +45°C (23°F to 113°F) when the device uses the following optical modules: - GE optical modules with a transmission distance of less than or equal to 10 km
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	<ul style="list-style-type: none"> <li>• Power adapter</li> <li>• PoE_IN</li> </ul>
Rated input voltage [V]	Power adapter input: 100-240 V AC; 50/60 Hz PoE input: 56 V DC
Input voltage range [V]	Power adapter input: 90-290 V AC; 47-63 Hz PoE input: 54-57 V DC
Maximum input current [A]	2.68 A
Memory	--

Item	Specification
Flash memory	--
Console port	Not supported
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 6$ kV
Power supply surge protection [kV]	Power adapter: $\pm 6$ kV in differential mode and $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.23.10 S5731-L8LP2ST-RUA

### Overview

**Table 4-1156** Basic information about the S5731-L8LP2ST-RUA

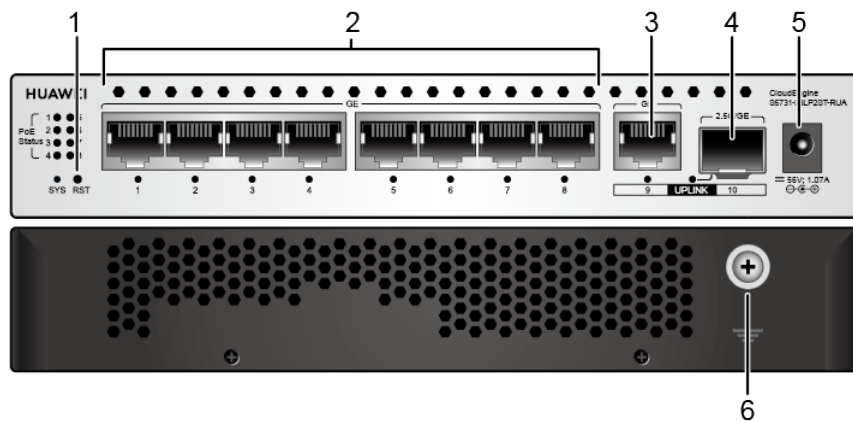
Item	Details
Description	S5731-L8LP2ST-RUA (8*10/100/1000BASE-T ports, PoE+, 1*GE SFP port, 1*10/100/1000BASE-T port, AC power, power adapter)
Part Number	98012186
Model	S5731-L8LP2ST-RUA
First supported version	V200R022C10 V600R022C10



Item	Details
Remarks	The RU itself does not have a software version. Instead, the first supported version of the RU depends on the software version of the central switch and varies for central switches running V200 and V600.

## Components

Figure 4-464 S5731-L8LP2ST-RUA appearance



1	One RST button <b>NOTICE</b> To reset the device, press and hold down the button for less than 6s.	2	Eight 10/100/1000BASE-T PoE+ ports
3	One 10/100/1000BASE-T port <b>NOTE</b> The port is an uplink port.	4	One GE/2.5GE optical port <b>NOTE</b> The port is an uplink port. The 2.5GE rate is supported in V200R023C00 or V600R023C00 and later versions.
5	Power adapter socket <b>NOTE</b> Use the power adapter (56 V, 1.07 A) delivered with the device.	6	Ground screw

## Ports

**Table 4-1157** Ports on the S5731-L8LP2ST-RUA

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T PoE+ Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	<b>Ethernet cable</b>
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>
GE/2.5GE optical port	SFP	A GE/2.5GE optical port can send and receive data at 1000 Mbit/s or 2.5 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li> </ul>

## Indicators and Buttons

The S5731-L8LP2ST-RUA has similar indicators to those on the S5731-L8P2HT-RUA. For details, see the S5731-L8P2HT-RUA.

## Power Supply System

The remote unit uses the power adapter delivered with the device to supply power to the remote unit and the connected PDs.

**Table 4-1158** Power supply configurations

Power Supply Mode	Available PoE Power	Maximum Number of Ports (Fully Loaded)
External power adapter	45 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 2</li><li>802.3at (30 W per port): 1</li></ul>

## Heat Dissipation System

The remote unit has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1159** Technical specifications of the S5731-L8LP2ST-RUA

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 38.0 mm x 210.0 mm x 130.0 mm (1.5 in. x 8.27 in. x 5.12 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 38.0 mm x 210.0 mm x 130.0 mm (1.5 in. x 8.27 in. x 5.12 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	76.0 mm x 357.0 mm x 242.0 mm (2.99 in. x 14.06 in. x 9.53 in.)
Chassis height [U]	0.855 U
Weight without packaging [kg(lb)]	1.06 kg (2.34 lb)
Weight with packaging [kg(lb)]	1.36 kg (3.0 lb)
Typical power consumption [W]	8.6 W (device) 9.44 W (device + power adapter)

Item	Specification
Typical heat dissipation [BTU/hour]	29.34 (device) 32.23 (device + power adapter)
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 9.0 W (device)/9.66 W (device + power adapter)</li> <li>Full PoE load: 59.6 W (PoE: 45 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 30.71 (device)/32.96 (device + power adapter)</li> <li>Full PoE load: 203.36</li> </ul>
Static power consumption [W]	4.1 W
MTBF [years]	75.78 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans), < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans), < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.44 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5905.44-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (721.78 ft.).</p> <p>The device cannot start when the temperature is lower than 0°C (32°F).</p> <p>The operating temperature of a device ranges from -5°C to +45°C (23°F to 113°F) when the device uses the following optical modules:</p> <ul style="list-style-type: none"> <li>- GE optical modules with a transmission distance of less than or equal to 10 km</li> </ul>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)

Item	Specification
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Power adapter
Rated input voltage [V]	Power adapter input: 100-240 V AC; 50/60 Hz Power adapter output: 56 V DC
Input voltage range [V]	Power adapter input: 90 V AC to 290 V AC; 45 Hz to 65 Hz
Maximum input current [A]	1.07 A
Memory	--
Flash memory	--
Console port	Not supported
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 6$ kV
Power supply surge protection [kV]	Power adapter: $\pm 6$ kV in differential mode and $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.23.11 S5731-L16P2SR-RUA

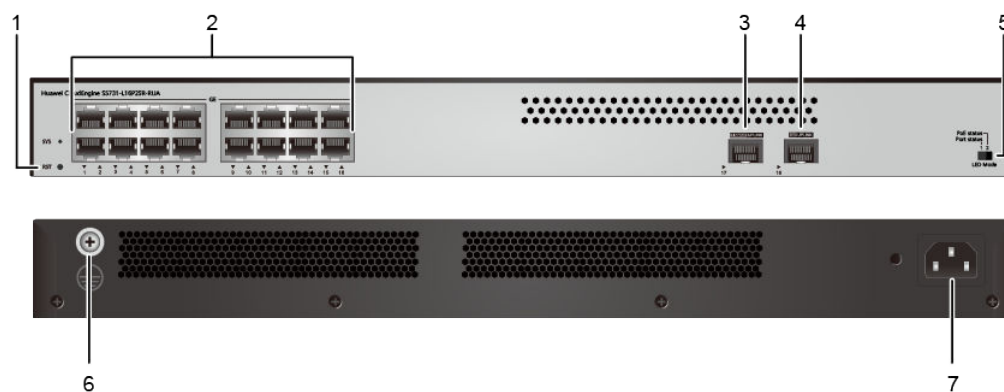
## Overview

**Table 4-1160** Basic information about the S5731-L16P2SR-RUA

Item	Details
Description	S5731-L16P2SR-RUA(16*10/100/1000BASE-T ports, 2*GE SFP ports, PoE+, AC power)
Part Number	98012157
Model	S5731-L16P2SR-RUA
First supported version	V200R022C10 V600R022C10
Remarks	The RU itself does not have a software version. Instead, the first supported version of the RU depends on the software version of the central switch and varies for central switches running V200 and V600.

## Components

**Figure 4-465** S5731-L16P2SR-RUA appearance



1	One RST button  <b>NOTICE</b> To reset the device, press and hold down the button for less than 6s.	2	Sixteen 10/100/1000BASE-T PoE+ ports
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3	One GE/2.5GE optical port <b>NOTE</b> The port is an uplink port. The 2.5GE rate is supported in V200R023C00 or V600R023C00 and later versions.	4	One GE optical port <b>NOTE</b> The port is an uplink port.
5	Port indicator status switch <b>NOTE</b> Port status: The port indicator indicates the data connection status of the port. PoE status: The port indicator indicates the PoE status of the port.	6	Ground screw
7	AC socket <b>NOTE</b> Use the power cable delivered with the device.	-	-

## Ports

**Table 4-1161** Ports on the S5731-L16P2SR-RUA

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	<b>Ethernet cable</b>
GE optical port	SFP	A GE optical port can send and receive data at 1000 Mbit/s.	<b>GE eSFP optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b>

Port	Connector Type	Description	Available Components
GE/2.5GE optical port	SFP	A GE/2.5GE optical port can send and receive data at 1000 Mbit/s or 2.5 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li> </ul>

## Indicators and Buttons

**Table 4-1162** Description of indicators on the device

Name	Color	Status	Description
System status indicator	-	Off	The system is not running.
	Green	Fast blinking	The system is starting.
	Green	Slow blinking	The system is running normally.
Port indicator (service status)	-	Off	The port is not connected.
	Green	Steady on	The port is connected.
	Green	Blinking	The port is sending or receiving data.
Port indicator (PoE status)	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.



Name	Color	Status	Description
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port.

## Power Supply System

The remote unit has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 125 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at.

## Heat Dissipation System

The remote unit has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1163** Technical specifications of the S5731-L16P2SR-RUA

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 260.0 mm (1.72 in. x 17.40 in. x 10.24 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 267.0 mm (1.72 in. x 17.40 in. x 10.51 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 555.0 mm x 400.0 mm (3.54 in. x 21.85 in. x 15.75 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.01 kg (6.64 lb)
Weight with packaging [kg(lb)]	3.65 kg (8.05 lb)
Typical power consumption [W]	16.42 W
Typical heat dissipation [BTU/hour]	56.03 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 16.7 W</li> <li>Full PoE load: 160.45 W (PoE: 125 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 56.98</li> <li>Full PoE load: 547.47</li> </ul>

Item	Specification
Static power consumption [W]	9.28 W
MTBF [years]	78.68 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans), < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans), < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.44 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). Devices cannot start when the temperature is lower than 0°C (32°F).
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100-240 V AC; 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 300 V AC; 47 Hz to 63 Hz
Maximum input current [A]	3 A
Memory	-
Flash memory	-
Console port	Not supported

Item	Specification
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 6$ kV
Power supply surge protection [kV]	Differential mode: $\pm 6$ kV; common mode: $\pm 6$ kV
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation without fans
Airflow direction	N/A
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.24 S5731S-L

### 4.24.1 S5731S-L4P2HW-RUA

#### Overview

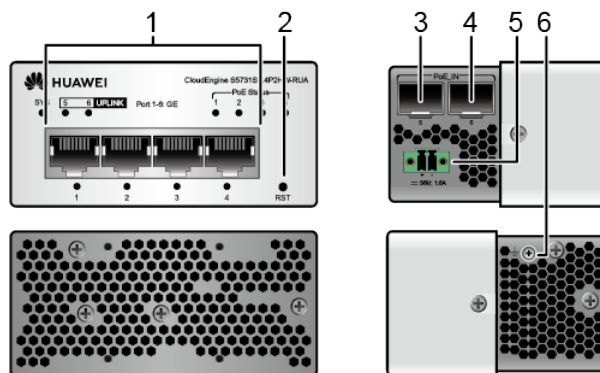
**Table 4-1164** Basic information about the S5731S-L4P2HW-RUA

Item	Details
Description	S5731S-L4P2HW-RUA (4*10/100/1000BASE-T ports, PoE++, 2*GE hybrid optical-electrical SFP ports, AC power, power adapter)
Part Number	98011767
Model	S5731S-L4P2HW-RUA
First supported version	V200R021C10SPC500 V600R022C10

Item	Details
Remarks	The RU itself does not have a software version. Instead, the first supported version of the RU depends on the software version of the central switch and varies for central switches running V200 and V600.

## Components

Figure 4-466 S5731S-L4P2HW-RUA appearance



1	Four 10/100/1000BASE-T PoE++ ports	2	One RST button <b>NOTICE</b> To reset the device, press and hold down the button for less than 6s.
3	One GE hybrid optical-electrical port <b>NOTE</b> The port is an uplink port. The port can receive PoE power from a central switch through the second-generation hybrid cable. When using a hybrid cable to receive power, you must use the pigtails or jumpers and hybrid modules matching the second-generation hybrid cable.	4	One GE/2.5GE hybrid optical-electrical port <b>NOTE</b> The port is an uplink port. The 2.5GE rate is supported in V200R023C00 or V600R023C00 and later versions. The port can receive PoE power from a central switch through the second-generation hybrid cable. When using a hybrid cable to receive power, you must use the pigtails or jumpers and hybrid modules matching the second-generation hybrid cable.

5	Power adapter socket (phoenix connector)  <b>NOTE</b> Use the power adapter (56 V, 1.6 A) delivered with the device.	6	Ground screw
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## Ports

**Table 4-1165** Ports on the S5731S-L4P2HW-RUA

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE++ port	RJ45	A 10/100/1000BASE-T PoE++ Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	<b>Ethernet cable</b>
GE hybrid optical-electrical port	SFP	A GE hybrid optical-electrical port can send and receive data at 1000 Mbit/s. It can receive PoE power from a central switch through a hybrid cable.	<ul style="list-style-type: none"><li>• <b>Industrial optical modules (only optical modules with 1 Gbit/s transmission speed and transmission distances less than or equal to 10 km are supported)</b></li><li>• <b>GE SFP Hybrid Modules</b></li><li>• <b>Second-generation hybrid cable</b></li></ul>

Port	Connector Type	Description	Available Components
GE/2.5GE hybrid optical-electrical port	SFP	A GE/2.5GE hybrid optical-electrical port can send and receive data at 1000 Mbit/s or 2.5 Gbit/s. It can receive PoE power from a central switch through a hybrid cable.	<ul style="list-style-type: none"><li>• <b>Industrial optical modules (only optical modules with 1 Gbit/s transmission speed and transmission distances less than or equal to 10 km are supported)</b></li><li>• <b>GE SFP Hybrid Modules</b></li><li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li><li>• <b>2.5GE eSFP Hybrid Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li><li>• <b>Second-generation hybrid cable</b></li></ul>

## Indicators and Buttons

The S5731S-L4P2HW-RUA has similar indicators to those on the S5731S-L8P2HT-RUA. For details, see the S5731S-L8P2HT-RUA.

## Power Supply System

The remote unit supports the following power supply modes:

- Powered by an external power adapter

- Powered by a central switch using hybrid cables

When different power supply modes are used at the same time, the system preferentially uses the power adapter for power supply. The cold backup mode is used between different power supply modes and cannot supply power to the remote unit at the same time. The two uplink ports have no default priority, and the connection time is used as the priority.

The remote unit can provide PoE power for external PDs. The PoE power supply capability varies according to the power supply mode.

**Table 4-1166** Power supply configurations

Power Supply Mode	Available PoE Power	Maximum Number of Ports (Fully Loaded)	Remark
Powered by an external power adapter	77 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 4</li> <li>• 802.3at (30 W per port): 2</li> <li>• 802.3bt (60 W per port): 1</li> </ul>	-
Powered by a central switch	Forcible power supply disabled (default): max 60 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 3</li> <li>• 802.3at (30 W per port): 2</li> <li>• 802.3bt (60 W per port): 1</li> </ul>	<ul style="list-style-type: none"> <li>• If no PD is connected to the remote unit, the central switch only supplies power to the remote unit. The PoE standard of the central switch must be 802.3at at least.</li> <li>• If PDs are connected to the remote unit, the central switch supplies power to the remote unit and the connected PDs. It is recommended that the output PoE standard of the central switch be 802.3bt and the output power be 90 W. If the 802.3at standard is used, the available power of the PDs connected to the remote unit may be insufficient.</li> </ul>
	Forcible power supply enabled: max 83 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 4</li> <li>• 802.3at (30 W per port): 2</li> <li>• 802.3bt (60 W per port): 1</li> </ul>	

## NOTICE

When the remote unit is powered by the central switch, the total power consumption of the remote unit and its connected PDs cannot exceed 71.3 W. If the power consumption exceeds 71.3 W, the remote unit and its connected PDs will be powered off and restarted.

When the remote unit is powered by the central switch, the maximum available PoE power in the preceding table can be provided only when the following conditions are met:

- When forcible power supply is disabled by default:
  - The PoE output of the central switch must comply with the 802.3bt class8 standard.
- When forcible power supply is enabled (using the **poE force-power port** command):
  - The PoE output of the central switch must comply with the 802.3bt class8 standard.
  - The central switch and the remote unit must be connected for a short distance (less than 8 m, with the line loss ignored). If the distance between the central switch and the remote unit is longer than 8 m and the PD is supplied with power based on the maximum power supply capability displayed on the central switch, the remote unit and the connected PD may be powered off and restarted.
  - The output voltage of the power module used by the central switch cannot be lower than 55.5 V.

The actual available PoE power provided by the remote unit is calculated based on the cabling distance between the central switch and the remote unit, the cabling distance between the remote unit and the connected PD, the maximum power consumption of the remote unit, the PoE output voltage of the central switch, and PoE class level output by the central switch.

If the power output of the remote unit is manually configured to comply with 802.3at or 802.3af, the PD connected to the remote unit will be power-cycled when the remote unit is reset due to a cause other than power-off.

## Heat Dissipation System

The remote unit has no fans and uses natural heat dissipation.



## Technical Specifications

**Table 4-1167** Technical specifications of the S5731S-L4P2HW-RUA

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 45.0 mm x 90.0 mm x 75.0 mm (1.77 in. x 3.54 in. x 2.95 in.)  Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 45.0 mm x 90.0 mm x 75.0 mm (1.77 in. x 3.54 in. x 2.95 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	92.0 mm x 340.0 mm x 222.0 mm (3.62 in. x 13.39 in. x 8.74 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	0.98 kg (2.16 lb)
Weight with packaging [kg(lb)]	1.36 kg (3.0 lb)
Typical power consumption [W]	6.67 W (device) 8.26 W (device + power adapter)
Typical heat dissipation [BTU/hour]	22.76 (device) 28.18 (device + power adapter)
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>● Without PoE: 7.00 W (device)/8.59 W (device + power adapter)</li> <li>● Full PoE load: 88.5 W (PoE: 77 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>● Without PoE: 23.88 (device)/29.31 (device + power adapter)</li> <li>● Full PoE load: 301.97</li> </ul>
Static power consumption [W]	5.62 W
MTBF [years]	75.17 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans): < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans): < 20
Number of card slots	0
Number of power slots	0

Item	Specification
Number of fans modules	0
Redundant power supply	Cold backup of hybrid optical-electrical ports and power adapters, cold backup between two hybrid optical-electrical ports, and preferential power supply by power adapters
Long-term operating temperature [°C(°F)]	-5°C to +40°C (41°F to 104°F) at an altitude of 0-1800 m (0-5905.44 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5905.44-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (721.78 ft.). The device cannot start when the temperature is lower than 0°C (32°F). The operating temperature of the device ranges from -5°C to +40°C (23°F to 104°F) when the following optical modules are used: - GE industrial optical modules with a transmission distance of less than or equal to 10 km
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	<ul style="list-style-type: none"><li>• Power adapter</li><li>• PoE_IN</li></ul>
Rated input voltage [V]	Power adapter input: 100-240 V AC; 50/60 Hz PoE input: 56 V DC
Input voltage range [V]	Power adapter input: 90-290 V AC; 47-63 Hz PoE input: 54-57 V DC
Maximum input current [A]	1.8 A
Memory	--
Flash memory	--
Console port	Not supported

Item	Specification
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 6$ kV
Power supply surge protection [kV]	Power adapter: $\pm 6$ kV in differential mode and $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.24.2 S5731S-L4T2S-RUA

### Overview

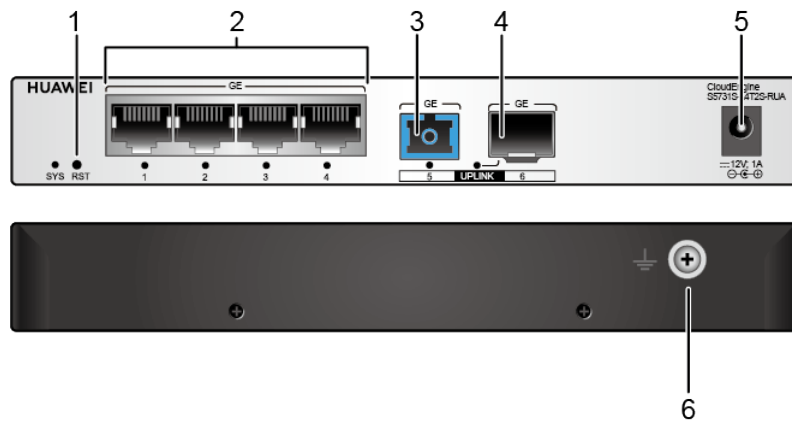
**Table 4-1168** Basic information about the S5731S-L4T2S-RUA

Item	Details
Description	S5731S-L4T2S-RUA (4*10/100/1000BASE-T ports, 1*GE SFP port, 1*GE port with an SC connector, TX1310 nm/RX1490 nm, AC power, power adapter)
Part Number	98011769
Model	S5731S-L4T2S-RUA
First supported version	V200R021C10SPC500 V600R022C10

Item	Details
Remarks	The RU itself does not have a software version. Instead, the first supported version of the RU depends on the software version of the central switch and varies for central switches running V200 and V600.

## Components

Figure 4-467 S5731S-L4T2S-RUA appearance



1	One RST button  <b>NOTICE</b> To reset the device, press and hold down the button for less than 6s.	2	Four 10/100/1000BASE-T ports
3	One GE optical port  <b>NOTE</b> The port is an uplink port. The port has a built-in single-fiber bidirectional optical module by default and cannot be removed.	4	One GE/2.5GE optical port  <b>NOTE</b> The port is an uplink port. The 2.5GE rate is supported in V200R023C00 or V600R023C00 and later versions.
5	Power adapter socket  <b>NOTE</b> Use the power adapter (12 V, 1 A) delivered with the device.	6	Ground screw

## Ports

**Table 4-1169** Ports on the S5731S-L4T2S-RUA

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>
GE/2.5GE optical port	SFP	A GE/2.5GE optical port can send and receive data at 1000 Mbit/s or 2.5 Gbit/s.	<ul style="list-style-type: none"><li>• <b>GE eSFP optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li><li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li></ul>

Port	Connector Type	Description	Available Components
GE optical port	SC	<p>A GE optical port can send and receive data at 1000 Mbit/s.</p> <p>The port has a built-in single-fiber bidirectional optical module by default and cannot be removed.</p> <p>Specifications of the built-in optical module: The rate is GE, the center wavelength is TX1310 nm or RX1490 nm, the connector type is SC, and the maximum transmission distance is 10 km.</p> <p>Only the SFP-GE-LX-SM1490-BIDI (RX1310nm/TX1490nm) optical module can be used on the peer port.</p>	-

## Indicators and Buttons

The S5731S-L4T2S-RUA has similar indicators to those on the S5731S-L8P2HT-RUA except that the S5731S-L4T2S-RUA does not have PoE indicators. For details, see the S5731S-L8P2HT-RUA.

## Power Supply System

The remote unit is powered by the power adapter delivered with the device.

## Heat Dissipation System

The remote unit has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1170** Technical specifications of the S5731S-L4T2S-RUA

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 27.0 mm x 185.0 mm x 115.0 mm (1.06 in. x 7.28 in. x 4.53 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 27.0 mm x 185.0 mm x 115.0 mm (1.06 in. x 7.28 in. x 4.53 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	82.0 mm x 342.0 mm x 228.0 mm (3.23 in. x 13.46 in. x 8.98 in.)
Chassis height [U]	0.61 U
Weight without packaging [kg(lb)]	0.72 kg (1.59 lb)
Weight with packaging [kg(lb)]	1.02 kg (2.25 lb)
Typical power consumption [W]	4.88 W (device) 5.08 W (device + power adapter)
Typical heat dissipation [BTU/hour]	16.65 (device) 17.33 (device + power adapter)
Maximum power consumption [W]	5.06 W (device) 5.26 W (device + power adapter)
Maximum heat dissipation [BTU/hour]	17.27 (device) 19.75 (device + power adapter)
Static power consumption [W]	2.62 W
MTBF [years]	83.23 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans): < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans): < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0

Item	Specification
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5905.44-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (721.78 ft.). The device cannot start when the temperature is lower than 0°C (32°F). The operating temperature of a device ranges from -5°C to +45°C (23°F to 113°F) when the device uses the following optical modules: - GE optical modules with a transmission distance of less than or equal to 10 km
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Power adapter
Rated input voltage [V]	Power adapter input: 100-240 V AC; 50/60 Hz Power adapter output: 12 V DC
Input voltage range [V]	Power adapter input: 90-290 V AC; 47-63 Hz
Maximum input current [A]	1 A
Memory	--
Flash memory	--
Console port	Not supported
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ±6 kV



Item	Specification
Power supply surge protection [kV]	Power adapter: $\pm 6$ kV in differential mode and $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.24.3 S5731S-L4T2ST-RUA

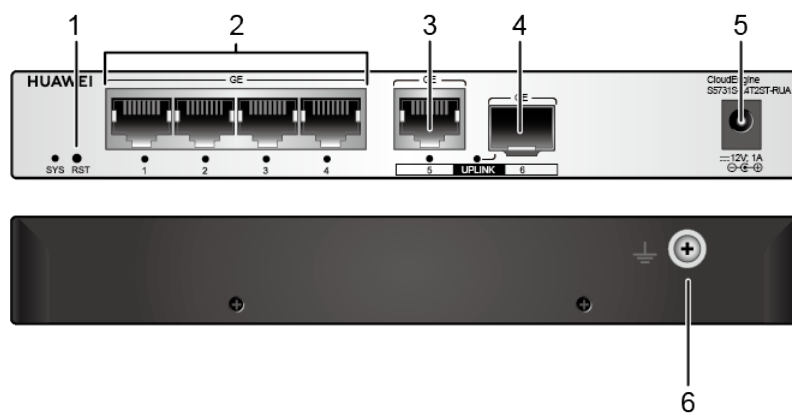
#### Overview

**Table 4-1171** Basic information about the S5731S-L4T2ST-RUA

Item	Details
Description	S5731S-L4T2ST-RUA (4*10/100/1000BASE-T ports, 1*GE SFP port, 1*10/100/1000BASE-T port, AC power, power adapter)
Part Number	98011771
Model	S5731S-L4T2ST-RUA
First supported version	V200R021C10SPC500 V600R022C10
Remarks	The RU itself does not have a software version. Instead, the first supported version of the RU depends on the software version of the central switch and varies for central switches running V200 and V600.

## Components

Figure 4-468 S5731S-L4T2ST-RUA appearance



1	<p>One RST button</p> <p><b>NOTICE</b></p> <p>To reset the device, press and hold down the button for less than 6s.</p>	2	<p>Four 10/100/1000BASE-T ports</p>
3	<p>One 10/100/1000BASE-T port</p> <p><b>NOTE</b></p> <p>The port is an uplink port.</p>	4	<p>One GE/2.5GE optical port</p> <p><b>NOTE</b></p> <p>The port is an uplink port.</p> <p>The 2.5GE rate is supported in V200R023C00 or V600R023C00 and later versions.</p>
5	<p>Power adapter socket</p> <p><b>NOTE</b></p> <p>Use the power adapter (12 V, 1 A) delivered with the device.</p>	6	<p>Ground screw</p>

## Ports

**Table 4-1172** Ports on the S5731S-L4T2ST-RUA

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>
GE/2.5GE optical port	SFP	A GE/2.5GE optical port can send and receive data at 1000 Mbit/s or 2.5 Gbit/s.	<ul style="list-style-type: none"><li>• <b>GE eSFP optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li><li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li></ul>

## Indicators and Buttons

The S5731S-L4T2ST-RUA has similar indicators to those on the S5731S-L8P2HT-RUA except that the S5731S-L4T2ST-RUA does not have PoE indicators. For details, see the S5731S-L8P2HT-RUA.

## Power Supply System

The remote unit is powered by the power adapter delivered with the device.

## Heat Dissipation System

The remote unit has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1173** Technical specifications of the S5731S-L4T2ST-RUA

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 27.0 mm x 185.0 mm x 115.0 mm (1.06 in. x 7.28 in. x 4.53 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 27.0 mm x 185.0 mm x 115.0 mm (1.06 in. x 7.28 in. x 4.53 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	82.0 mm x 342.0 mm x 228.0 mm (3.23 in. x 13.46 in. x 8.98 in.)
Chassis height [U]	0.61 U
Weight without packaging [kg(lb)]	0.74 kg (1.63 lb)
Weight with packaging [kg(lb)]	1.02 kg (2.25 lb)
Typical power consumption [W]	4.88 W (device) 5.08 W (device + power adapter)
Typical heat dissipation [BTU/hour]	16.65 (device) 17.33 (device + power adapter)
Maximum power consumption [W]	5.06 W (device) 5.26 W (device + power adapter)
Maximum heat dissipation [BTU/hour]	17.27 (device) 17.95 (device + power adapter)
Static power consumption [W]	2.62 W
MTBF [years]	83.23 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans): < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans): < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0

Item	Specification
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5905.44-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (721.78 ft.). The device cannot start when the temperature is lower than 0°C (32°F). The operating temperature of a device ranges from -5°C to +45°C (23°F to 113°F) when the device uses the following optical modules: - GE optical modules with a transmission distance of less than or equal to 10 km
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Power adapter
Rated input voltage [V]	Power adapter input: 100-240 V AC; 50/60 Hz Power adapter output: 12 V DC
Input voltage range [V]	Power adapter input: 90-290 V AC; 47-63 Hz
Maximum input current [A]	1 A
Memory	--
Flash memory	--
Console port	Not supported
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ±6 kV

Item	Specification
Power supply surge protection [kV]	Power adapter: $\pm 6$ kV in differential mode and $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.24.4 S5731S-L4P2S-RUA

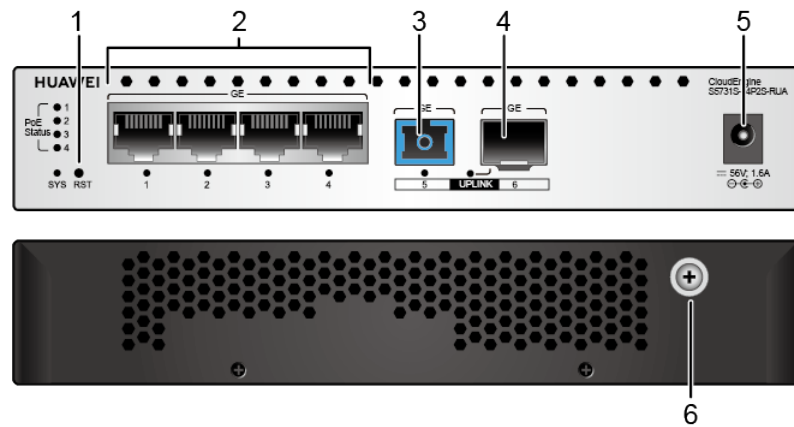
### Overview

**Table 4-1174** Basic information about the S5731S-L4P2S-RUA

Item	Details
Description	S5731S-L4P2S-RUA (4*10/100/1000BASE-T ports, PoE++, 1*GE SFP port, 1*GE port with an SC connector, TX1310 nm/RX1490 nm, AC power, power adapter)
Part Number	98011773
Model	S5731S-L4P2S-RUA
First supported version	V200R021C10SPC500 V600R022C10
Remarks	The RU itself does not have a software version. Instead, the first supported version of the RU depends on the software version of the central switch and varies for central switches running V200 and V600.

## Components

Figure 4-469 S5731S-L4P2S-RUA appearance



1	One RST button  <b>NOTICE</b> To reset the device, press and hold down the button for less than 6s.	2	Four 10/100/1000BASE-T PoE++ ports
3	One GE optical port  <b>NOTE</b> The port is an uplink port. The port has a built-in single-fiber bidirectional optical module by default and cannot be removed.	4	One GE/2.5GE optical port  <b>NOTE</b> The port is an uplink port. The 2.5GE rate is supported in V200R023C00 or V600R023C00 and later versions.
5	Power adapter socket  <b>NOTE</b> Use the power adapter (56 V, 1.6 A) delivered with the device.	6	Ground screw

## Ports

**Table 4-1175** Ports on the S5731S-L4P2S-RUA

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE++ port	RJ45	A 10/100/1000BASE-T PoE++ Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	<b>Ethernet cable</b>
GE/2.5GE optical port	SFP	A GE/2.5GE optical port can send and receive data at 1000 Mbit/s or 2.5 Gbit/s.	<ul style="list-style-type: none"><li>• <b>GE eSFP optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li><li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li></ul>



Port	Connector Type	Description	Available Components
GE optical port	SC	<p>A GE optical port can send and receive data at 1000 Mbit/s.</p> <p>The port has a built-in single-fiber bidirectional optical module by default and cannot be removed.</p> <p>Specifications of the built-in optical module: The rate is GE, the center wavelength is TX1310 nm or RX1490 nm, the connector type is SC, and the maximum transmission distance is 10 km.</p> <p>Only the SFP-GE-LX-SM1490-BIDI (RX1310nm/TX1490nm) optical module can be used on the peer port.</p>	-

## Indicators and Buttons

The S5731S-L4P2S-RUA has similar indicators to those on the S5731S-L8P2HT-RUA. For details, see the S5731S-L8P2HT-RUA.

## Power Supply System

The remote unit uses the power adapter delivered with the device to supply power to the remote unit and the connected PDs.

**Table 4-1176** Power supply configurations

Power Module	Available PoE Power	Maximum Number of Ports (Fully Loaded)
External power adapter	77 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 4</li> <li>● 802.3at (30 W per port): 2</li> <li>● 802.3bt (60 W per port): 1</li> </ul>

 **NOTE**

If the power output of the remote unit is manually configured to comply with 802.3at or 802.3af, the PD connected to the remote unit will be power-cycled when the remote unit is reset due to a cause other than power-off.

## Heat Dissipation System

The remote unit has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1177** Technical specifications of the S5731S-L4P2S-RUA

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	<p>Basic dimensions (excluding the parts protruding from the body): 38.0 mm x 185.0 mm x 115.0 mm (1.5 in. x 7.28 in. x 4.53 in.)</p> <p>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 38.0 mm x 185.0 mm x 115.0 mm (1.5 in. x 7.28 in. x 4.53 in.)</p>
Dimensions with packaging (H x W x D) [mm(in.)]	82.0 mm x 350.0 mm x 222.0 mm (3.23 in. x 13.78 in. x 8.74 in.)
Chassis height [U]	0.855 U
Weight without packaging [kg(lb)]	1.12 kg (2.47 lb)
Weight with packaging [kg(lb)]	1.46 kg (3.22 lb)
Typical power consumption [W]	6.82 W (device) 8.30 W (device + power adapter)
Typical heat dissipation [BTU/hour]	23.27 (device) 28.32 (device + power adapter)

Item	Specification
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 7.00 W (device)/8.48 W (device + power adapter)</li> <li>Full PoE load: 88.0 W (PoE: 77 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 23.88 (device)/28.94 (device + power adapter)</li> <li>Full PoE load: 300.27</li> </ul>
Static power consumption [W]	4.88 W
MTBF [years]	74.48 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans): < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans): < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5905.44-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (721.78 ft.).</p> <p>The device cannot start when the temperature is lower than 0°C (32°F).</p> <p>The operating temperature of a device ranges from -5°C to +45°C (23°F to 113°F) when the device uses the following optical modules:</p> <ul style="list-style-type: none"> <li>- GE optical modules with a transmission distance of less than or equal to 10 km</li> </ul>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)

Item	Specification
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Power adapter
Rated input voltage [V]	Power adapter input: 100–240 V AC; 50/60 Hz Power adapter output: 56 V DC
Input voltage range [V]	Power adapter input: 90–290 V AC; 47–63 Hz
Maximum input current [A]	1.6 A
Memory	--
Flash memory	--
Console port	Not supported
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 6$ kV
Power supply surge protection [kV]	Power adapter: $\pm 6$ kV in differential mode and $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.24.5 S5731S-L4P2ST-RUA

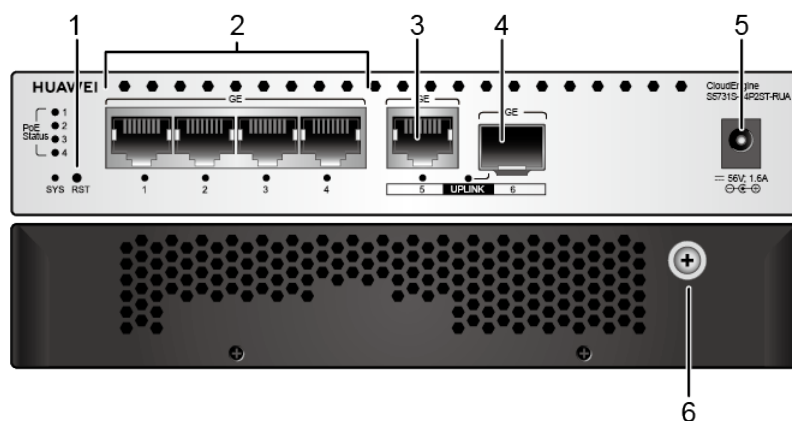
## Overview

**Table 4-1178** Basic information about the S5731S-L4P2ST-RUA

Item	Details
Description	S5731S-L4P2ST-RUA (4*10/100/1000BASE-T ports, PoE++, 1*GE SFP port, 1*10/100/1000BASE-T port, AC power, power adapter)
Part Number	98011775
Model	S5731S-L4P2ST-RUA
First supported version	V200R021C10SPC500 V600R022C10
Remarks	The RU itself does not have a software version. Instead, the first supported version of the RU depends on the software version of the central switch and varies for central switches running V200 and V600.

## Components

**Figure 4-470** S5731S-L4P2ST-RUA appearance



1	One RST button <b>NOTICE</b> To reset the device, press and hold down the button for less than 6s.	2	Four 10/100/1000BASE-T PoE++ ports
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3	One 10/100/1000BASE-T port <b>NOTE</b> The port is an uplink port.	4	One GE/2.5GE optical port <b>NOTE</b> The port is an uplink port. The 2.5GE rate is supported in V200R023C00 or V600R023C00 and later versions.
5	Power adapter socket <b>NOTE</b> Use the power adapter (56 V, 1.6 A) delivered with the device.	6	Ground screw

## Ports

**Table 4-1179** Ports on the S5731S-L4P2ST-RUA

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE++ port	RJ45	A 10/100/1000BASE-T PoE++ Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	<a href="#">Ethernet cable</a>
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
GE/2.5GE optical port	SFP	A GE/2.5GE optical port can send and receive data at 1000 Mbit/s or 2.5 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li> </ul>

## Indicators and Buttons

The S5731S-L4P2ST-RUA has similar indicators to those on the S5731S-L8P2HT-RUA. For details, see the S5731S-L8P2HT-RUA.

## Power Supply System

The remote unit uses the power adapter delivered with the device to supply power to the remote unit and the connected PDs.

**Table 4-1180** Power supply configurations

Power Module	Available PoE Power	Maximum Number of Ports (Fully Loaded)
External power adapter	77 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 4</li> <li>• 802.3at (30 W per port): 2</li> <li>• 802.3bt (60 W per port): 1</li> </ul>

### NOTE

If the power output of the remote unit is manually configured to comply with 802.3at or 802.3af, the PD connected to the remote unit will be power-cycled when the remote unit is reset due to a cause other than power-off.

## Heat Dissipation System

The remote unit has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1181** Technical specifications of the S5731S-L4P2ST-RUA

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 38.0 mm x 185.0 mm x 115.0 mm (1.5 in. x 7.28 in. x 4.53 in.)  Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 38.0 mm x 185.0 mm x 115.0 mm (1.5 in. x 7.28 in. x 4.53 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	82.0 mm x 350.0 mm x 222.0 mm (3.23 in. x 13.78 in. x 8.74 in.)
Chassis height [U]	0.855 U
Weight without packaging [kg(lb)]	1.14 kg (2.51 lb)
Weight with packaging [kg(lb)]	1.46 kg (3.22 lb)
Typical power consumption [W]	6.80 W (device) 7.68 W (device + power adapter)
Typical heat dissipation [BTU/hour]	23.20 (device) 26.21 (device + power adapter)
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>• Without PoE: 7.00 W (device)/7.88 W (device + power adapter)</li> <li>• Full PoE load: 88.0 W (PoE: 77 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>• Without PoE: 23.88 (device)/26.89 (device + power adapter)</li> <li>• Full PoE load: 300.27</li> </ul>
Static power consumption [W]	4.68 W
MTBF [years]	78.74 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans): < 30



Item	Specification
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans): < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5905.44-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (721.78 ft.). The device cannot start when the temperature is lower than 0°C (32°F). The operating temperature of a device ranges from -5°C to +45°C (23°F to 113°F) when the device uses the following optical modules: - GE optical modules with a transmission distance of less than or equal to 10 km
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Power adapter
Rated input voltage [V]	Power adapter input: 100-240 V AC; 50/60 Hz Power adapter output: 56 V DC
Input voltage range [V]	Power adapter input: 90-290 V AC; 47-63 Hz
Maximum input current [A]	1.6 A
Memory	--
Flash memory	--
Console port	Not supported

Item	Specification
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 6$ kV
Power supply surge protection [kV]	Power adapter: $\pm 6$ kV in differential mode and $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.24.6 S5731S-L4P2HT-RUA

### Overview

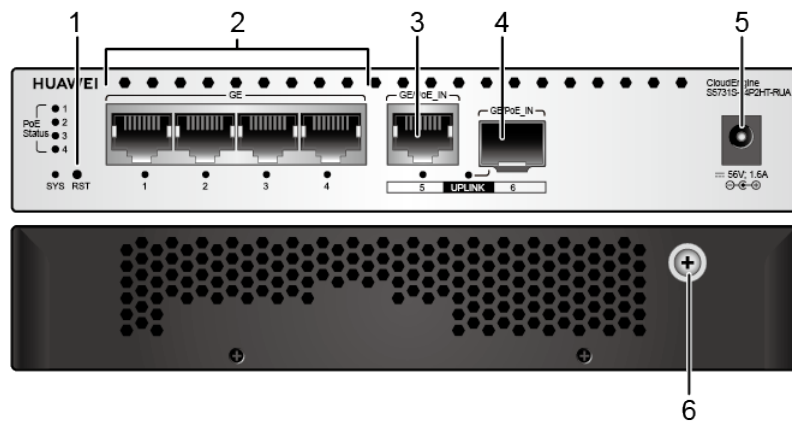
**Table 4-1182** Basic information about the S5731S-L4P2HT-RUA

Item	Details
Description	S5731S-L4P2HT-RUA (4*10/100/1000BASE-T ports, PoE++, 1*GE hybrid optical-electrical SFP port, 1*10/100/1000BASE-T port, PoE input)
Part Number	98011777
Model	S5731S-L4P2HT-RUA
First supported version	V200R021C10SPC500 V600R022C10

Item	Details
Remarks	The RU itself does not have a software version. Instead, the first supported version of the RU depends on the software version of the central switch and varies for central switches running V200 and V600.

## Components

Figure 4-471 S5731S-L4P2HT-RUA appearance



1	<p>One RST button</p> <p><b>NOTICE</b></p> <p>To reset the device, press and hold down the button for less than 6s.</p>	2	<p>Four 10/100/1000BASE-T PoE++ ports</p>
3	<p>One 10/100/1000BASE-T port</p> <p><b>NOTE</b></p> <p>The port is an uplink port.</p> <p>The port can receive PoE power from a central switch through an Ethernet cable or the first-generation hybrid cable.</p>	4	<p>One GE/2.5GE hybrid optical-electrical port</p> <p><b>NOTE</b></p> <p>The port is an uplink port.</p> <p>The 2.5GE rate is supported in V200R023C00 or V600R023C00 and later versions.</p> <p>The port can receive PoE power from a central switch through the second-generation hybrid cable.</p> <p>When using a hybrid cable to receive power, you must use the pigtails or jumpers and hybrid modules matching the second-generation hybrid cable.</p>

5	Power adapter socket  <b>NOTE</b> The power adapter is not delivered with the device by default and can be purchased separately (part number: 02221024).	6	Ground screw
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## Ports

**Table 4-1183** Ports on the S5731S-L4P2HT-RUA

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE++ port	RJ45	A 10/100/1000BASE-T PoE++ Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.  The port supports the PoE function.	<b>Ethernet cable</b>
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.  It can receive PoE power from a central switch through an Ethernet cable.	<ul style="list-style-type: none"> <li>• <b>Ethernet cable</b></li> <li>• <b>First-generation hybrid cable</b></li> </ul>

Port	Connector Type	Description	Available Components
GE/2.5GE hybrid optical-electrical port	SFP	A GE/2.5GE hybrid optical-electrical port can send and receive data at 1000 Mbit/s or 2.5 Gbit/s. It can receive PoE power from a central switch through a hybrid cable.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li> <li>• <b>GE SFP Hybrid Modules</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li> <li>• <b>2.5GE eSFP Hybrid Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li> <li>• <b>First-generation hybrid cable</b></li> <li>• <b>Second-generation hybrid cable</b></li> </ul>

## Indicators and Buttons

The S5731S-L4P2HT-RUA has similar indicators to those on the S5731S-L8P2HT-RUA. For details, see the S5731S-L8P2HT-RUA.

## Power Supply System

The remote unit supports the following power supply modes:

- Powered by an external power adapter (separately purchased)
- Powered by a central switch using an Ethernet cable of Cat5e or higher category (occupies the uplink electrical port, which is used for both PoE power input and data transmission)
- Powered by a central switch using the second-generation hybrid cable (occupies the uplink hybrid optical-electrical port, which is used for both PoE power input and data transmission)
- Powered by a central switch using the first-generation hybrid cable (occupies the uplink electrical port and uplink hybrid optical-electrical port. The uplink electrical port is used for PoE power input, and the uplink hybrid optical-electrical port is used for data transmission.)

When different power supply modes are used at the same time, the system preferentially uses the power adapter for power supply. The cold backup mode is used between different power supply modes and cannot supply power to the remote unit at the same time. The two uplink ports have no default priority, and the connection time is used as the priority.

The remote unit can provide PoE power for external PDs. The PoE power supply capability varies according to the power supply mode.

**Table 4-1184** Power supply configurations

Power Supply Mode	Available PoE Power	Maximum Number of Ports (Fully Loaded)	Remark
Powered by an external power adapter	77 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 4</li> <li>• 802.3at (30 W per port): 2</li> <li>• 802.3bt (60 W per port): 1</li> </ul>	-
Powered by a central switch	Forcible power supply disabled (default): max 60 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 3</li> <li>• 802.3at (30 W per port): 2</li> <li>• 802.3bt (60 W per port): 1</li> </ul>	<ul style="list-style-type: none"> <li>• If no PD is connected to the remote unit, the central switch only supplies power to the remote unit. The PoE standard of the central switch must be 802.3at at least.</li> <li>• If PDs are connected to the remote unit, the central switch supplies power to the remote unit and the connected PDs. It is recommended that the output PoE standard of the</li> </ul>

Power Supply Mode	Available PoE Power	Maximum Number of Ports (Fully Loaded)	Remark
	Forcible power supply enabled: max 83 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 4</li><li>802.3at (30 W per port): 2</li><li>802.3bt (60 W per port): 1</li></ul>	central switch be 802.3bt and the output power be 90 W. If the 802.3at standard is used, the available power of the PDs connected to the remote unit may be insufficient.

**NOTICE**

When the remote unit is powered by the central switch, the total power consumption of the remote unit and its connected PDs cannot exceed 71.3 W. If the power consumption exceeds 71.3 W, the remote unit and its connected PDs will be powered off and restarted.

When the remote unit is powered by the central switch, the maximum available PoE power in the preceding table can be provided only when the following conditions are met:

- When forcible power supply is disabled by default:
  - The PoE output of the central switch must comply with the 802.3bt class8 standard.
- When forcible power supply is enabled (using the **poe force-power port** command):
  - The PoE output of the central switch must comply with the 802.3bt class8 standard.
  - The central switch and the remote unit must be connected for a short distance (less than 8 m, with the line loss ignored). If the distance between the central switch and the remote unit is longer than 8 m and the PD is supplied with power based on the maximum power supply capability displayed on the central switch, the remote unit and the connected PD may be powered off and restarted.
  - The output voltage of the power module used by the central switch cannot be lower than 55.5 V.

The actual available PoE power provided by the remote unit is calculated based on the cabling distance between the central switch and the remote unit, the cabling distance between the remote unit and the connected PD, the maximum power consumption of the remote unit, the PoE output voltage of the central switch, and PoE class level output by the central switch.

If the power output of the remote unit is manually configured to comply with 802.3at or 802.3af, the PD connected to the remote unit will be power-cycled when the remote unit is reset due to a cause other than power-off.

## Heat Dissipation System

The remote unit has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1185** Technical specifications of the S5731S-L4P2HT-RUA

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 38.0 mm x 185.0 mm x 115.0 mm (1.5 in. x 7.28 in. x 4.53 in.)  Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 38.0 mm x 185.0 mm x 115.0 mm (1.5 in. x 7.28 in. x 4.53 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	82.0 mm x 270.0 mm x 178.0 mm (3.23 in. x 10.63 in. x 7.01 in.)
Chassis height [U]	0.855 U
Weight without packaging [kg(lb)]	0.60 kg (1.32 lb)
Weight with packaging [kg(lb)]	0.81 kg (1.79 lb)
Typical power consumption [W]	6.82 W (device) 8.30 W (device + power adapter)
Typical heat dissipation [BTU/hour]	23.27 (device) 28.32 (device + power adapter)
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>● Without PoE: 7.00 W (device)/8.48 W (device + power adapter)</li> <li>● Full PoE load: 88.0 W (PoE: 77 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>● Without PoE: 23.88 (device)/28.94 (device + power adapter)</li> <li>● Full PoE load: 300.265</li> </ul>
Static power consumption [W]	4.88 W
MTBF [years]	73.98 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans): < 30



Item	Specification
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans): < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Cold backup of uplink hybrid optical-electrical ports or electrical ports and power adapters, cold backup of uplink hybrid optical-electrical ports and electrical ports, and preferential power supply by power adapters (By default, no power adapter is provided, and the power adapter 02221024 can be used.)
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5905.44-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (721.78 ft.).</p> <p>The device cannot start when the temperature is lower than 0°C (32°F).</p> <p>The operating temperature of a device ranges from -5°C to +45°C (23°F to 113°F) when the device uses the following optical modules:</p> <ul style="list-style-type: none"> <li>- GE optical modules with a transmission distance of less than or equal to 10 km</li> </ul>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	<ul style="list-style-type: none"> <li>• Power adapter</li> <li>• PoE_IN</li> </ul>
Rated input voltage [V]	Power adapter input: 100-240 V AC; 50/60 Hz PoE input: 56 V DC

Item	Specification
Input voltage range [V]	Power adapter input: 90–290 V AC; 47–63 Hz PoE input: 54–57 V DC
Maximum input current [A]	1.8 A
Memory	--
Flash memory	--
Console port	Not supported
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 6$ kV
Power supply surge protection [kV]	Power adapter: $\pm 6$ kV in differential mode and $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

#### 4.24.7 S5731S-L8T2ST-RUA

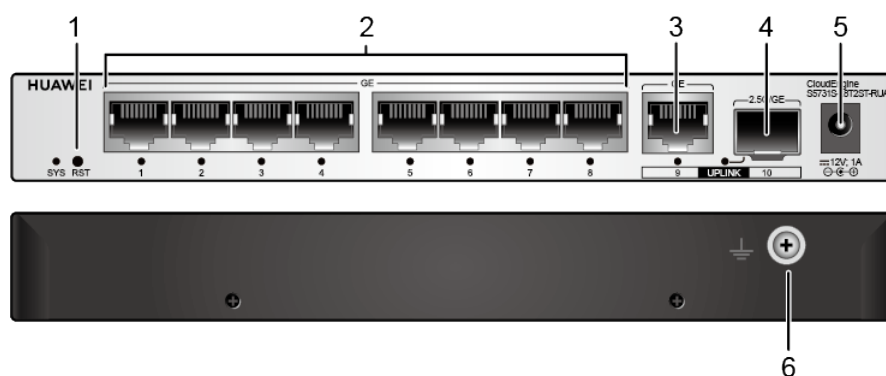
## Overview

**Table 4-1186** Basic information about the S5731S-L8T2ST-RUA

Item	Details
Description	S5731S-L8T2ST-RUA (8*10/100/1000BASE-T ports, 1*GE SFP port, 1*10/100/1000BASE-T port, AC power, power adapter)
Part Number	98011779
Model	S5731S-L8T2ST-RUA
First supported version	V200R021C10SPC500 V600R022C10
Remarks	The RU itself does not have a software version. Instead, the first supported version of the RU depends on the software version of the central switch and varies for central switches running V200 and V600.

## Components

**Figure 4-472** S5731S-L8T2ST-RUA appearance



1	One RST button <b>NOTICE</b> To reset the device, press and hold down the button for less than 6s.	2	Eight 10/100/1000BASE-T ports
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3	<p>One 10/100/1000BASE-T port</p> <p><b>NOTE</b> The port is an uplink port.</p>	4	<p>One GE/2.5GE optical port</p> <p><b>NOTE</b> The port is an uplink port. The 2.5GE rate is supported in V200R023C00 or V600R023C00 and later versions.</p>
5	<p>Power adapter socket</p> <p><b>NOTE</b> Use the power adapter (12 V, 1 A) delivered with the device.</p>	6	<p>Ground screw</p>

## Ports

**Table 4-1187** Ports on the S5731S-L8T2ST-RUA

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>
GE/2.5GE optical port	SFP	A GE/2.5GE optical port can send and receive data at 1000 Mbit/s or 2.5 Gbit/s.	<ul style="list-style-type: none"> <li><a href="#">GE eSFP optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</a></li> <li><a href="#">2.5GE eSFP Optical Modules (supported in V200R023C00 or V600R023C00 and later versions)</a></li> </ul>

## Indicators and Buttons

The S5731S-L8T2ST-RUA has similar indicators to those on the S5731S-L8P2HT-RUA except that the S5731S-L8T2ST-RUA does not have PoE indicators. For details, see the S5731S-L8P2HT-RUA.

## Power Supply System

The remote unit is powered by the power adapter delivered with the device.

## Heat Dissipation System

The remote unit has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1188** Technical specifications of the S5731S-L8T2ST-RUA

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 27.0 mm x 210.0 mm x 130.0 mm (1.06 in. x 8.27 in. x 5.12 in.)  Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 27.0 mm x 210.0 mm x 130.0 mm (1.06 in. x 8.27 in. x 5.12 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	82.0 mm x 347.0 mm x 242.0 mm (3.23 in. x 13.66 in. x 9.53 in.)
Chassis height [U]	0.61 U
Weight without packaging [kg(lb)]	0.84 kg (1.85 lb)
Weight with packaging [kg(lb)]	1.14 kg (2.51 lb)
Typical power consumption [W]	7.73 W (device) 7.98 W (device + power adapter)
Typical heat dissipation [BTU/hour]	26.38 (device) 27.23 (device + power adapter)
Maximum power consumption [W]	7.86 W (device) 8.11 W (device + power adapter)
Maximum heat dissipation [BTU/hour]	26.82 (device) 27.67 (device + power adapter)
Static power consumption [W]	3.23 W
MTBF [years]	84.79 years

Item	Specification
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans): < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans): < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5905.44-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (721.78 ft.).</p> <p>The device cannot start when the temperature is lower than 0°C (32°F).</p> <p>The operating temperature of a device ranges from -5°C to +45°C (23°F to 113°F) when the device uses the following optical modules:</p> <ul style="list-style-type: none"> <li>- GE optical modules with a transmission distance of less than or equal to 10 km</li> </ul>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Power adapter
Rated input voltage [V]	Power adapter input: 100-240 V AC; 50/60 Hz Power adapter output: 12 V DC
Input voltage range [V]	Power adapter input: 90-290 V AC; 47-63 Hz

Item	Specification
Maximum input current [A]	1 A
Memory	--
Flash memory	--
Console port	Not supported
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 6$ kV
Power supply surge protection [kV]	Power adapter: $\pm 6$ kV in differential mode and $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.24.8 S5731S-L8P2ST-RUA

### Overview

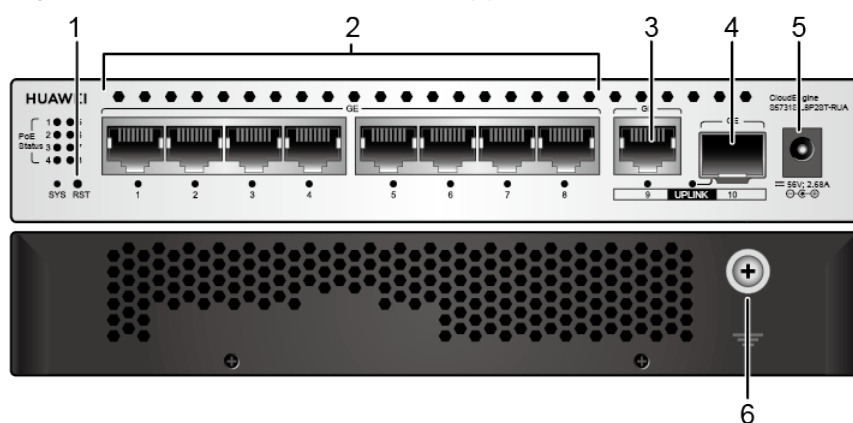
**Table 4-1189** Basic information about the S5731S-L8P2ST-RUA

Item	Details
Description	S5731S-L8P2ST-RUA (8*10/100/1000BASE-T ports, PoE+, 1*GE SFP port, 1*10/100/1000BASE-T port, AC power, power adapter)
Part Number	98011781
Model	S5731S-L8P2ST-RUA

Item	Details
First supported version	V200R021C10SPC500 V600R022C10
Remarks	The RU itself does not have a software version. Instead, the first supported version of the RU depends on the software version of the central switch and varies for central switches running V200 and V600.

## Components

Figure 4-473 S5731S-L8P2ST-RUA appearance



1	One RST button <b>NOTICE</b> To reset the device, press and hold down the button for less than 6s.	2	Eight 10/100/1000BASE-T PoE+ ports
3	One 10/100/1000BASE-T port <b>NOTE</b> The port is an uplink port.	4	One GE/2.5GE optical port <b>NOTE</b> The port is an uplink port. The 2.5GE rate is supported in V200R023C00 or V600R023C00 and later versions.
5	Power adapter socket <b>NOTE</b> Use the power adapter (56 V, 2.68 A) delivered with the device.	6	Ground screw



## Ports

**Table 4-1190** Ports on the S5731S-L8P2ST-RUA

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T PoE+ Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	<b>Ethernet cable</b>
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>
GE/2.5GE optical port	SFP	A GE/2.5GE optical port can send and receive data at 1000 Mbit/s or 2.5 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li> </ul>

## Indicators and Buttons

The S5731S-L8P2ST-RUA has similar indicators to those on the S5731S-L8P2HT-RUA. For details, see the S5731S-L8P2HT-RUA.

## Power Supply System

The remote unit uses the power adapter delivered with the device to supply power to the remote unit and the connected PDs.

**Table 4-1191** Power supply configurations

Power Supply Mode	Available PoE Power	Maximum Number of Ports (Fully Loaded)
External power adapter	131 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 8</li> <li>802.3at (30 W per port): 4</li> </ul>

## Heat Dissipation System

The remote unit has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1192** Technical specifications of the S5731S-L8P2ST-RUA

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	<p>Basic dimensions (excluding the parts protruding from the body): 38.0 mm x 210.0 mm x 130.0 mm (1.5 in. x 8.27 in. x 5.12 in.)</p> <p>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 38.0 mm x 210.0 mm x 130.0 mm (1.5 in. x 8.27 in. x 5.12 in.)</p>
Dimensions with packaging (H x W x D) [mm(in.)]	82.0 mm x 375.0 mm x 242.0 mm (3.23 in. x 14.76 in. x 9.53 in.)
Chassis height [U]	0.855 U
Weight without packaging [kg(lb)]	1.59 kg (3.51 lb)
Weight with packaging [kg(lb)]	1.98 kg (4.37 lb)
Typical power consumption [W]	<p>9.69 W (device)</p> <p>11.36 W (device + power adapter)</p>

Item	Specification
Typical heat dissipation [BTU/hour]	33.06 (device) 38.76 (device + power adapter)
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 10.0 W (device)/11.67 W (device + power adapter)</li> <li>Full PoE load: 146.0 W (PoE: 131 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 34.12 (device)/39.82 (device + power adapter)</li> <li>Full PoE load: 498.17</li> </ul>
Static power consumption [W]	6.48 W
MTBF [years]	75.78 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans): < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans): < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5905.44-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (721.78 ft.).</p> <p>The device cannot start when the temperature is lower than 0°C (32°F).</p> <p>The operating temperature of a device ranges from -5°C to +45°C (23°F to 113°F) when the device uses the following optical modules:</p> <ul style="list-style-type: none"> <li>- GE optical modules with a transmission distance of less than or equal to 10 km</li> </ul>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)

Item	Specification
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Power adapter
Rated input voltage [V]	Power adapter input: 100-240 V AC; 50/60 Hz Power adapter output: 56 V DC
Input voltage range [V]	Power adapter input: 90-290 V AC; 47-63 Hz
Maximum input current [A]	2.68 A
Memory	--
Flash memory	--
Console port	Not supported
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 6$ kV
Power supply surge protection [kV]	Power adapter: $\pm 6$ kV in differential mode and $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

#### 4.24.9 S5731S-L8P2HT-RUA

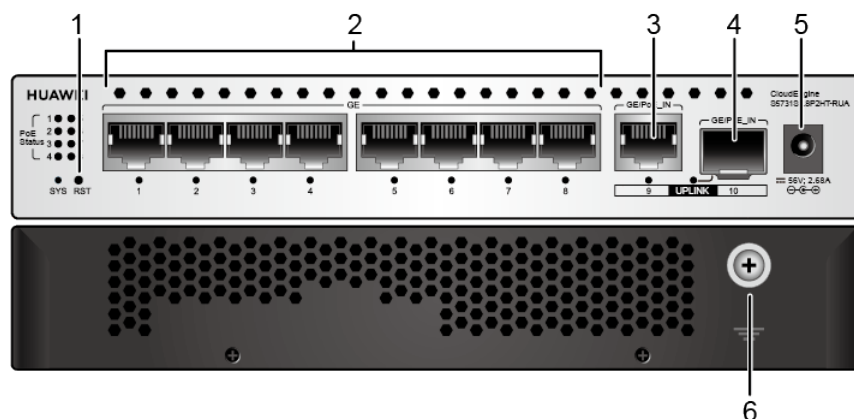
## Overview

**Table 4-1193** Basic information about the S5731S-L8P2HT-RUA

Item	Details
Description	S5731S-L8P2HT-RUA (8*10/100/1000BASE-T ports, PoE+, 1*GE hybrid optical-electrical SFP port, 1*10/100/1000BASE-T port, PoE input)
Part Number	98011783
Model	S5731S-L8P2HT-RUA
First supported version	V200R021C10SPC500 V600R022C10
Remarks	The RU itself does not have a software version. Instead, the first supported version of the RU depends on the software version of the central switch and varies for central switches running V200 and V600.

## Components

**Figure 4-474** S5731S-L8P2HT-RUA appearance



1	One RST button  <b>NOTICE</b> To reset the device, press and hold down the button for less than 6s.	2	Eight 10/100/1000BASE-T PoE+ ports
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3	<p>One 10/100/1000BASE-T port</p> <p><b>NOTE</b></p> <p>The port is an uplink port.</p> <p>The port can receive PoE power from a central switch through an Ethernet cable or the first-generation hybrid cable.</p>	4	<p>One GE/2.5GE hybrid optical-electrical port</p> <p><b>NOTE</b></p> <p>The port is an uplink port.</p> <p>The 2.5GE rate is supported in V200R023C00 or V600R023C00 and later versions.</p> <p>The port can receive PoE power from a central switch through the second-generation hybrid cable.</p> <p>When using a hybrid cable to receive power, you must use the pigtailed or jumpers and hybrid modules matching the second-generation hybrid cable.</p>
5	<p>Power adapter socket</p> <p><b>NOTE</b></p> <p>The power adapter is not delivered with the device by default and can be purchased separately (part number: 02221024).</p>	6	<p>Ground screw</p>

## Ports

**Table 4-1194** Ports on the S5731S-L8P2HT-RUA

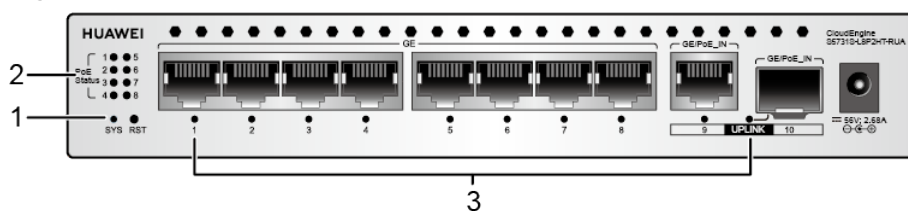
Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	<p>A 10/100/1000BASE-T PoE+ Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.</p> <p>The port supports the PoE function.</p>	<p><b>Ethernet cable</b></p>

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. It can receive PoE power from a central switch through an Ethernet cable.	<ul style="list-style-type: none"> <li>• <b>Ethernet cable</b></li> <li>• <b>First-generation hybrid cable</b></li> </ul>

Port	Connector Type	Description	Available Components
GE/2.5GE hybrid optical-electrical port	SFP	A GE/2.5GE hybrid optical-electrical port can send and receive data at 1000 Mbit/s or 2.5 Gbit/s. It can receive PoE power from a central switch through a hybrid cable.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li> <li>• <b>GE SFP Hybrid Modules</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li> <li>• <b>2.5GE eSFP Hybrid Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li> <li>• <b>First-generation hybrid cable</b></li> <li>• <b>Second-generation hybrid cable</b></li> </ul>

## Indicators and Buttons

Figure 4-475 Indicators on the S5731S-L8P2HT-RUA





**Table 4-1195** Description of indicators on the device

No.	Indicator	Name	Color	Status	Description
1	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
2	PoE STATUS	PoE status indicator	-	Off	The port is connected to a non-PD device or is not supplying PoE power.
			Yellow	Steady on	The port is supplying power to the connected PD.
			Yellow	Blinking	The port is connected to a non-standard PD that can be powered by the port. You can change the power supply mode of the port to force-power so that it can provide power to the PD.  The PoE power of the switch is insufficient, and the port cannot provide power to the PD.
3	1-10	Service port indicator	-	Off	The port is not connected.
			Green	Steady on	The port is connected.
			Green	Blinking	The port is sending or receiving data.

## Power Supply System

The remote unit supports the following power supply modes:

- Powered by an external power adapter (separately purchased)
- Powered by a central switch using an Ethernet cable of Cat5e or higher category (occupies the uplink electrical port, which is used for both PoE power input and data transmission)
- Powered by a central switch using the second-generation hybrid cable (occupies the uplink hybrid optical-electrical port, which is used for both PoE power input and data transmission)
- Powered by a central switch using the first-generation hybrid cable (occupies the uplink electrical port and uplink hybrid optical-electrical port. The uplink electrical port is used for PoE power input, and the uplink hybrid optical-electrical port is used for data transmission.)

When different power supply modes are used at the same time, the system preferentially uses the power adapter for power supply. The cold backup mode is used between different power supply modes and cannot supply power to the remote unit at the same time. The two uplink ports have no default priority, and the connection time is used as the priority.

The remote unit can provide PoE power for external PDs. The PoE power supply capability varies according to the power supply mode.

**Table 4-1196** Power supply configurations

Power Supply Mode	Available PoE Power	Maximum Number of Ports (Fully Loaded)	Remark
Powered by an external power adapter	131 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 8</li> <li>802.3at (30 W per port): 4</li> </ul>	-
Powered by a central switch	Forcible power supply disabled (default): max 57 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 3</li> <li>802.3at (30 W per port): 1</li> </ul>	<ul style="list-style-type: none"> <li>If no PD is connected to the remote unit, the central switch only supplies power to the remote unit. The PoE standard of the central switch must be 802.3at at least.</li> <li>If PDs are connected to the remote unit, the central switch supplies power to the remote unit and the connected PDs. It is recommended that the output PoE standard of the central switch be 802.3bt and the output power be 90 W. If the 802.3at standard is used, the available power of the PDs connected to the remote unit may be insufficient.</li> </ul>
	Enable forcible power supply: max 80 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 5</li> <li>802.3at (30 W per port): 2</li> </ul>	

---

### NOTICE

When the remote unit is powered by the central switch, the total power consumption of the remote unit and its connected PDs cannot exceed 71.3 W. If the power consumption exceeds 71.3 W, the remote unit and its connected PDs will be powered off and restarted.

When the remote unit is powered by the central switch, the maximum available PoE power in the preceding table can be provided only when the following conditions are met:

- When forcible power supply is disabled by default:
  - The PoE output of the central switch must comply with the 802.3bt class8 standard.
- When forcible power supply is enabled (using the **poE force-power port** command):
  - The PoE output of the central switch must comply with the 802.3bt class8 standard.
  - The central switch and the remote unit must be connected for a short distance (less than 8 m, with the line loss ignored). If the distance between the central switch and the remote unit is longer than 8 m and the PD is supplied with power based on the maximum power supply capability displayed on the central switch, the remote unit and the connected PD may be powered off and restarted.
  - The output voltage of the power module used by the central switch cannot be lower than 55.5 V.

The actual available PoE power provided by the remote unit is calculated based on the cabling distance between the central switch and the remote unit, the cabling distance between the remote unit and the connected PD, the maximum power consumption of the remote unit, the PoE output voltage of the central switch, and PoE class level output by the central switch.

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## Heat Dissipation System

The remote unit has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1197** Technical specifications of the S5731S-L8P2HT-RUA

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 38.0 mm x 210.0 mm x 130.0 mm (1.5 in. x 8.27 in. x 5.12 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 38.0 mm x 210.0 mm x 130.0 mm (1.5 in. x 8.27 in. x 5.12 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	82.0 mm x 275.0 mm x 196.0 mm (3.23 in. x 10.83 in. x 7.72 in.)
Chassis height [U]	0.855 U
Weight without packaging [kg(lb)]	0.75 kg (1.65 lb)
Weight with packaging [kg(lb)]	0.94 kg (2.07 lb)
Typical power consumption [W]	8.82 W (device) 10.82 W (device + power adapter)
Typical heat dissipation [BTU/hour]	30.09 (device) 36.92 (device + power adapter)
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 9.60 W (device)/11.60 W (device + power adapter)</li> <li>Full PoE load: 146 W (PoE: 131 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 32.76 (device)/39.58 (device + power adapter)</li> <li>Full PoE load: 498.17</li> </ul>
Static power consumption [W]	5.6 W
MTBF [years]	71.36 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans): < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans): < 20
Number of card slots	0
Number of power slots	0

Item	Specification
Number of fans modules	0
Redundant power supply	Cold backup of uplink hybrid optical-electrical ports or electrical ports and power adapters, cold backup of uplink hybrid optical-electrical ports and electrical ports, and preferential power supply by power adapters (By default, no power adapter is provided, and the power adapter 02221024 can be used.)
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5905.44-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (721.78 ft.). The device cannot start when the temperature is lower than 0°C (32°F). The operating temperature of a device ranges from -5°C to +45°C (23°F to 113°F) when the device uses the following optical modules: - GE optical modules with a transmission distance of less than or equal to 10 km
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	<ul style="list-style-type: none"> <li>• Power adapter</li> <li>• PoE_IN</li> </ul>
Rated input voltage [V]	Power adapter input: 100-240 V AC; 50/60 Hz PoE input: 56 V DC
Input voltage range [V]	Power adapter input: 90-290 V AC; 47-63 Hz PoE input: 54-57 V DC
Maximum input current [A]	2.68 A
Memory	--

Item	Specification
Flash memory	--
Console port	Not supported
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 6$ kV
Power supply surge protection [kV]	Power adapter: $\pm 6$ kV in differential mode and $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.24.10 S5731S-L16P2SR-RUA

### Overview

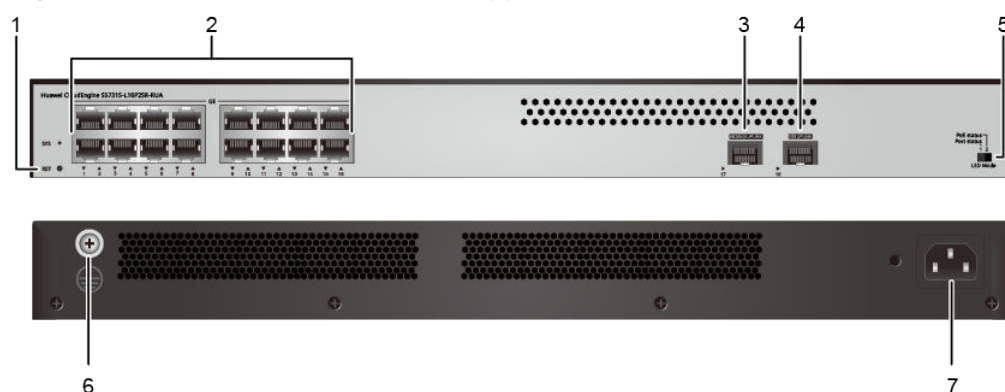
**Table 4-1198** Basic information about the S5731S-L16P2SR-RUA

Item	Details
Description	S5731S-L16P2SR-RUA(16*10/100/1000BASE-T ports, 2*GE SFP ports, PoE+, AC power)
Part Number	98012159
Model	S5731S-L16P2SR-RUA
First supported version	V200R022C10 V600R022C10

Item	Details
Remarks	The RU itself does not have a software version. Instead, the first supported version of the RU depends on the software version of the central switch and varies for central switches running V200 and V600.

## Components

Figure 4-476 S5731S-L16P2SR-RUA appearance



1	<p>One RST button</p> <p><b>NOTICE</b></p> <p>To reset the device, press and hold down the button for less than 6s.</p>	2	<p>Sixteen 10/100/1000BASE-T PoE+ ports</p>
3	<p>One GE/2.5GE optical port</p> <p><b>NOTE</b></p> <p>The port is an uplink port.</p> <p>The 2.5GE rate is supported in V200R023C00 or V600R023C00 and later versions.</p>	4	<p>One GE optical port</p> <p><b>NOTE</b></p> <p>The port is an uplink port.</p>
5	<p>Port indicator status switch</p> <p><b>NOTE</b></p> <p>Port status: The port indicator indicates the data connection status of the port.</p> <p>PoE status: The port indicator indicates the PoE status of the port.</p>	6	<p>Ground screw</p>

7	<p>AC socket</p> <p><b>NOTE</b> Use the power cable delivered with the device.</p>	-	-
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## Ports

**Table 4-1199** Ports on the S5731S-L16P2SR-RUA

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	<b>Ethernet cable</b>
GE optical port	SFP	A GE optical port can send and receive data at 1000 Mbit/s.	<b>GE eSFP optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b>



Port	Connector Type	Description	Available Components
GE/2.5GE optical port	SFP	A GE/2.5GE optical port can send and receive data at 1000 Mbit/s or 2.5 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 or V600R023C00 and later versions)</b></li> </ul>

## Indicators and Buttons

**Table 4-1200** Description of indicators on the device

Name	Color	Status	Description
System status indicator	-	Off	The system is not running.
	Green	Fast blinking	The system is starting.
	Green	Slow blinking	The system is running normally.
Port indicator (service status)	-	Off	The port is not connected.
	Green	Steady on	The port is connected.
	Green	Blinking	The port is sending or receiving data.
Port indicator (PoE status)	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.

Name	Color	Status	Description
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port.

## Power Supply System

The remote unit has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 125 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at.

## Heat Dissipation System

The remote unit has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1201** Technical specifications of the S5731S-L16P2SR-RUA

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 260.0 mm (1.72 in. x 17.40 in. x 10.24 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 267.0 mm (1.72 in. x 17.40 in. x 10.51 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 555.0 mm x 400.0 mm (3.54 in. x 21.85 in. x 15.75 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.19 kg (7.03 lb)
Weight with packaging [kg(lb)]	3.83 kg (8.44 lb)
Typical power consumption [W]	16.42 W
Typical heat dissipation [BTU/hour]	56.03 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 16.7 W</li> <li>Full PoE load: 160.45 W (PoE: 125 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 56.98</li> <li>Full PoE load: 547.47</li> </ul>

Item	Specification
Static power consumption [W]	9.28 W
MTBF [years]	78.68 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans), < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans), < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.44 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).  Devices cannot start when the temperature is lower than 0°C (32°F).
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100-240 V AC; 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 300 V AC; 47 Hz to 63 Hz
Maximum input current [A]	3 A
Memory	-
Flash memory	-
Console port	Not supported

Item	Specification
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 6$ kV
Power supply surge protection [kV]	Differential mode: $\pm 6$ kV; common mode: $\pm 6$ kV
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation without fans
Airflow direction	N/A
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.25 S5731-S

### 4.25.1 S5731-S24T4X (02353AHU/02353AHU-001)

#### Version Mapping

**Table 4-1202** lists the mapping between the S5731-S24T4X chassis and software versions.

**Table 4-1202** Version mapping

Series	Model	Software Version
S5731-S	S5731-S24T4X	02353AHU: V200R019C00 and later versions 02353AHU-001: V200R020C10 and later versions

## Appearance and Structure

Figure 4-477 S5731-S24T4X (02353AHU) appearance

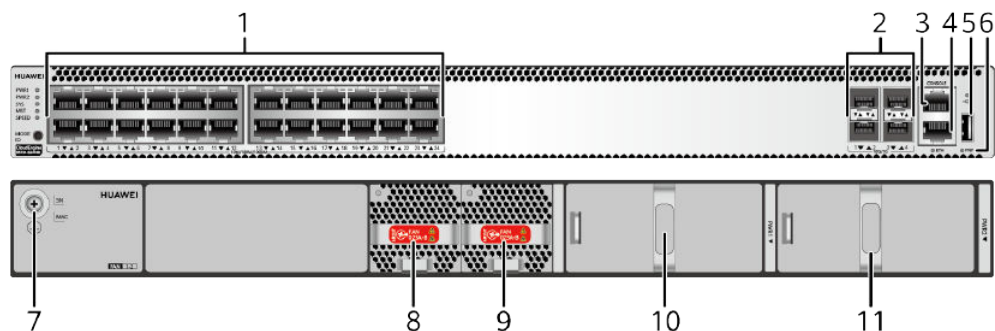
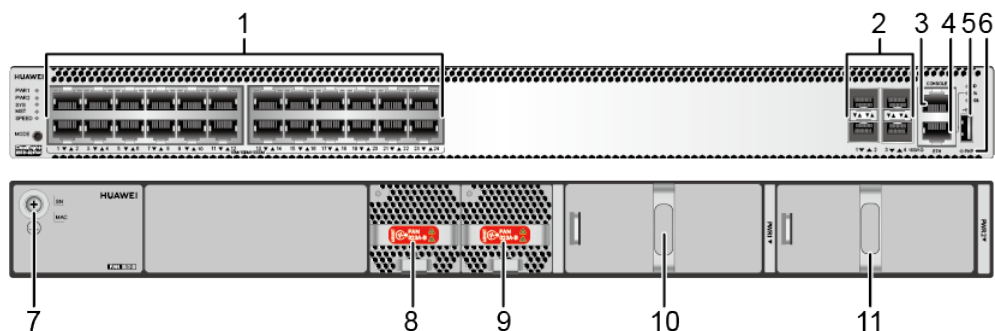


Figure 4-478 S5731-S24T4X (02353AHU-001) appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One console port	4	One ETH management port

5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <a href="#">ground cable</a>.</p>	8	<p>Fan module slot 1</p> <p><b>NOTE</b></p> <p>Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>
9	<p>Fan module slot 2</p> <p><b>NOTE</b></p> <p>Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	10	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>

1 1	Power module slot 2  <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>	-	-
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1203](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1203** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1204](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1204** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1205](#).

**Table 4-1205** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1206](#) describes the attributes of an ETH management port.

**Table 4-1206** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45



Attribute	Description
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

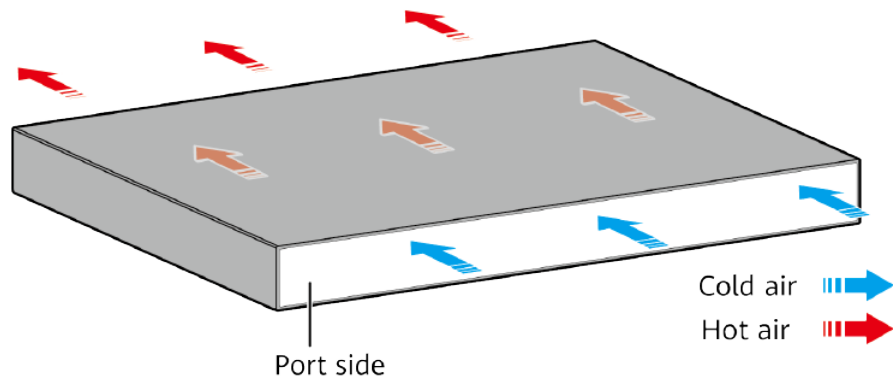
The S5731-S24T4X has similar indicators to those on the S5731-S48P4X except that the S5731-S24T4X does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation

The S5731-S24T4X uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1207** lists technical specifications of the S5731-S24T4X.

**Table 4-1207** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	57.73 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)</li> </ul>

Item	Description
Weight (with packaging)	8.4 kg (18.52 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>• High-Voltage DC input: 240 V DC</li> <li>• DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>• AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>• High-Voltage DC input: 190 V DC to 290 V DC</li> <li>• DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	114 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	88 W
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b>  When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02353AHU 02353AHU-001

## 4.25.2 S5731-S24T4X (98011851)

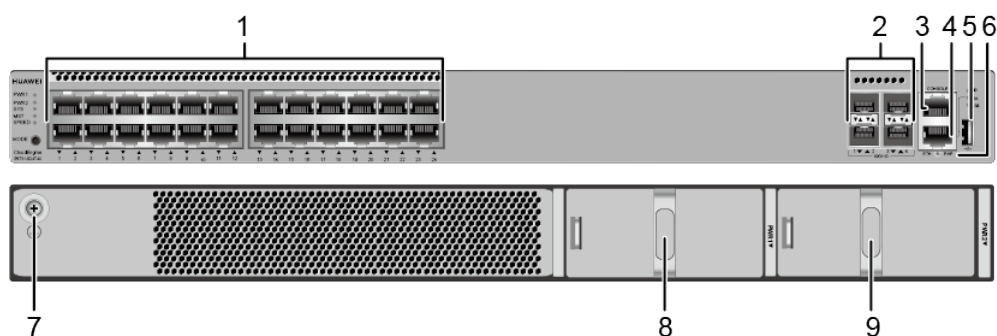
### Overview

**Table 4-1208** Basic information about the S5731-S24T4X

Item	Details
Description	S5731-S24T4X (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, without power module)
Part Number	98011851
Model	S5731-S24T4X
First supported version	V200R021C10SPC600
Supported Patch Version	If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch.

### Components

**Figure 4-479** S5731-S24T4X appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ optical ports
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button  <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.  To reset the switch, press the button.  Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw  <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Power module slot 1  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>
9	Power module slot 2  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>	-	-

## Ports

**Table 4-1209** Ports on the S5731-S24T4X

Port	Connector Type	Description	Available Components
10/100/1000BASE -T port	RJ45	A 10/100/1000BASE -T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive



Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

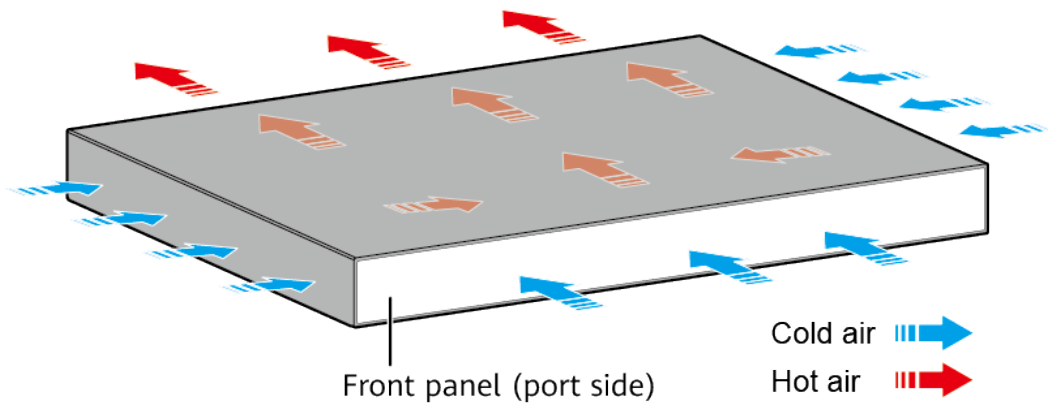
The S5731-S24T4X has similar indicators to those on the S5731-S48P4X except that the S5731-S24T4X does not have a PoE mode indicator. For details, see the S5731-S48P4X.

## Power Supply System

The switch can use a single power module or two power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1210** Technical specifications of the S5731-S24T4X

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	4.84 kg (10.67 lb)
Weight with packaging [kg(lb)]	7.37 kg (16.25 lb)
Typical power consumption [W]	61 W
Typical heat dissipation [BTU/hour]	208.14 BTU/hour
Maximum power consumption [W]	87 W
Maximum heat dissipation [BTU/hour]	296.85 BTU/hour
Static power consumption [W]	44 W
MTBF [years]	86.81 years
MTTR [hours]	2 hours

Item	Specification
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	45.62 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.94 dB(A)
Number of card slots	0
Number of power slots	2
Number of fans modules	2
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). Devices cannot start when the temperature is lower than 0°C (32°F). The operating temperature of the switch is -5°C to +45°C (23°F to 113°F) when 10GE SFP+ optical modules with 40 km or longer transmission distances are used.
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: -48 V DC to -60 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 290 V AC; 45–65 Hz</li> <li>● High-voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum input current [A]	The current specifications are related to the pluggable power module. For details, see Pluggable Power Modules.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	<ul style="list-style-type: none"> <li>● Configured with AC power modules: <math>\pm 6</math> kV in differential mode and <math>\pm 6</math> kV in common mode</li> <li>● Configured with DC power modules: <math>\pm 2</math> kV in differential mode and <math>\pm 4</math> kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air flows in from the left, right, and front, and flows out from the rear.
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.25.3 S5731-S24T4X-A (98011858)

#### Overview

**Table 4-1211** Basic information about the S5731-S24T4X-A

Item	Details
Description	S5735-L24T4X-A (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)
Part Number	98011858
Model	S5731-S24T4X-A
First supported version	V200R021C10SPC500

#### Components

**Figure 4-480** S5731-S24T4X-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .	-	-

## Ports

**Table 4-1212** Ports on the S5731-S24T4X-A

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <a href="#">GE eSFP optical modules</a></li> <li>• <a href="#">GE-CWDM eSFP optical modules</a></li> <li>• <a href="#">GE-DWDM eSFP optical modules</a></li> <li>• <a href="#">GE SFP copper module</a></li> <li>• <a href="#">10GE SFP+ optical modules (OSXD22N00 not supported)</a></li> <li>• <a href="#">10GE-CWDM SFP+ optical modules</a></li> <li>• <a href="#">10GE-DWDM SFP+ optical modules</a></li> <li>• <a href="#">1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</a></li> <li>• <a href="#">3 m and 10 m SFP+ AOC cables</a></li> <li>• <a href="#">0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</a></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive



Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

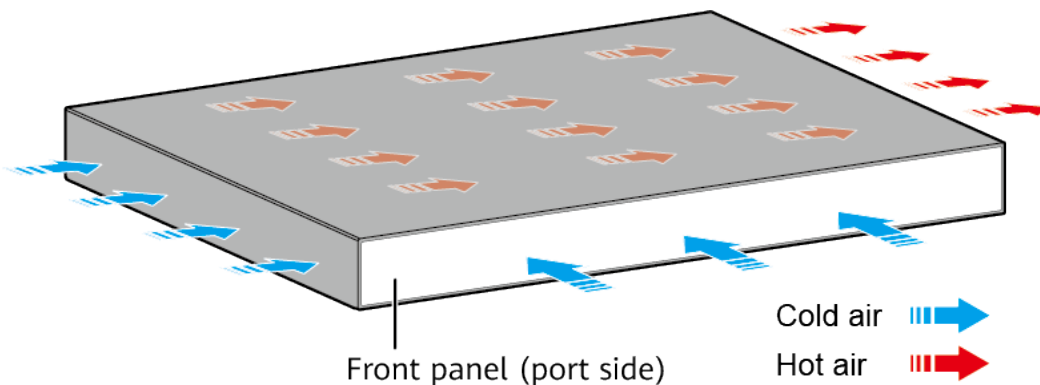
The S5731-S24T4X-A has the same types of indicators as the S5731-S48T4X-A. For details, see the S5731-S48T4X-A.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1213** Technical specifications of the S5731-S24T4X-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 355.0 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.04 kg (6.7 lb)
Weight with packaging [kg(lb)]	4.40 kg (9.7 lb)
Typical power consumption [W]	63 W
Typical heat dissipation [BTU/hour]	214.96 BTU/hour
Maximum power consumption [W]	80 W
Maximum heat dissipation [BTU/hour]	272.97 BTU/hour
Static power consumption [W]	48 W
MTBF [years]	47.34 years
MTTR [hours]	2 hours
Availability	> 0.99999

Item	Specification
Noise at normal temperature (acoustic power) [dB(A)]	44.90 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.21 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F).</p> <p>The operating temperature of the switch is -5°C to +45°C (23°F to 113°F) when 10GE SFP+ optical modules with 40 km or longer transmission distances are used.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	3 A
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.

Item	Specification
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.25.4 S5731-S24T4X-A (98011858-001)

### Overview

**Table 4-1214** Basic information about the S5731-S24T4X-A

Item	Details
Description	S5735-L24T4X-A (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)
Part Number	98011858-001
Model	S5731-S24T4X-A
First supported version	V200R021C10SPC600

Item	Details
Supported Patch Version	If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch.

## Components

Figure 4-481 S5731-S24T4X-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Ports

**Table 4-1215** Ports on the S5731-S24T4X-A

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive



Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

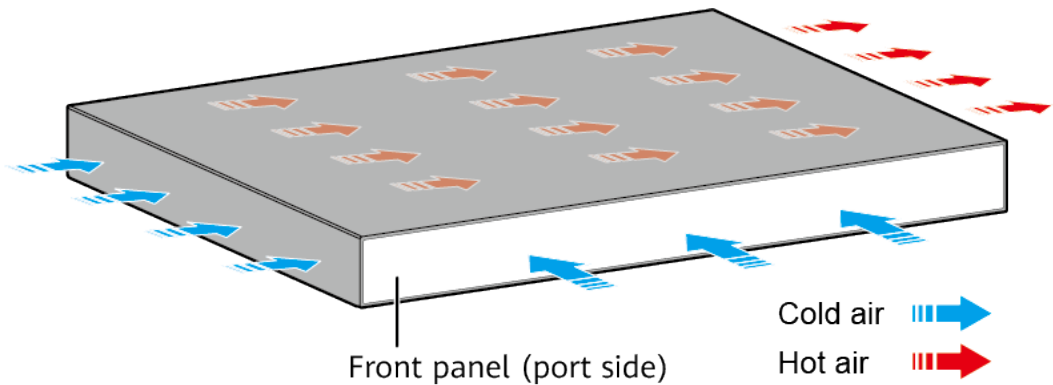
The S5731-S24T4X-A has the same types of indicators as the S5731-S48T4X-A. For details, see the S5731-S48T4X-A.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1216** Technical specifications of the S5731-S24T4X-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 355.0 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.04 kg (6.7 lb)
Weight with packaging [kg(lb)]	4.40 kg (9.7 lb)
Typical power consumption [W]	63 W
Typical heat dissipation [BTU/hour]	214.96 BTU/hour
Maximum power consumption [W]	80 W
Maximum heat dissipation [BTU/hour]	272.97 BTU/hour
Static power consumption [W]	48 W
MTBF [years]	47.34 years
MTTR [hours]	2 hours
Availability	> 0.99999

Item	Specification
Noise at normal temperature (acoustic power) [dB(A)]	44.90 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.21 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F).</p> <p>The operating temperature of the switch is -5°C to +45°C (23°F to 113°F) when 10GE SFP+ optical modules with 40 km or longer transmission distances are used.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100-240 V AC; 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	3 A
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45

Item	Specification
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	Differential mode: $\pm 6$ kV; common mode: $\pm 6$ kV
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.25.5 S5731-S24T4X-D (98011860)

### Overview

**Table 4-1217** Basic information about the S5731-S24T4X-D

Item	Details
Description	S5731-S24T4X-D (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, DC power)
Part Number	98011860
Model	S5731-S24T4X-D
First supported version	V200R021C10SPC500

## Components

Figure 4-482 S5731-S24T4X-D appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	8	DC power terminal <b>NOTE</b> It is used with <b>DC Power Cable</b> .

## Ports

**Table 4-1218** Ports on the S5731-S24T4X-D

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li><li>• <b>10GE-CWDM SFP+ optical modules</b></li><li>• <b>10GE-DWDM SFP+ optical modules</b></li><li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li><li>• <b>3 m and 10 m SFP+ AOC cables</b></li><li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li></ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive



Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

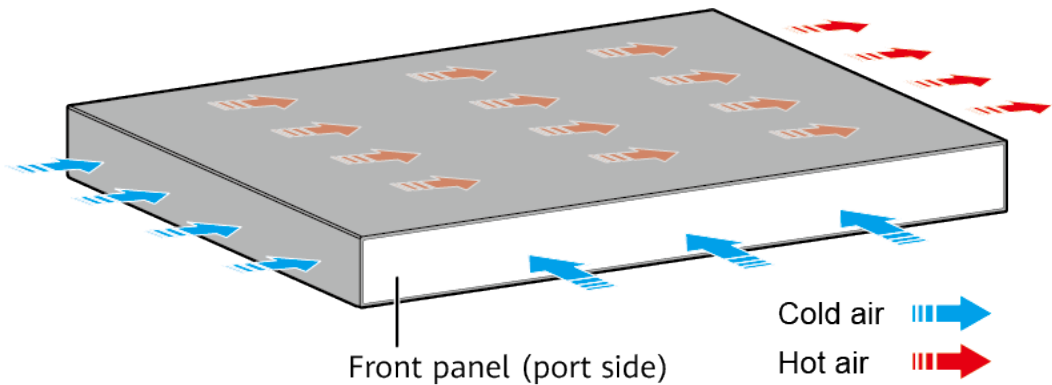
The S5731-S24T4X-D has the same types of indicators as the S5731-S48T4X-A. For details, see the S5731-S48T4X-A.

## Power Supply System

The switch has a built-in DC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1219** Technical specifications of the S5731-S24T4X-D

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.40 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 236.0 mm (1.72 in. x 17.40 in. x 9.29 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 355.0 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.26 kg (7.19 lb)
Weight with packaging [kg(lb)]	4.62 kg (10.19 lb)
Typical power consumption [W]	57 W
Typical heat dissipation [BTU/hour]	194.49 BTU/hour
Maximum power consumption [W]	76 W
Maximum heat dissipation [BTU/hour]	259.32 BTU/hour
Static power consumption [W]	42 W
MTBF [years]	47.34 years
MTTR [hours]	2 hours

Item	Specification
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	44.90 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.21 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). Devices cannot start when the temperature is lower than 0°C (32°F). The operating temperature of the switch is -5°C to +45°C (23°F to 113°F) when 10GE SFP+ optical modules with 40 km or longer transmission distances are used.
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	DC built-in
Rated input voltage [V]	-48 V DC to -60 V DC
Input voltage range [V]	-38.4 V DC to -72 V DC
Maximum input current [A]	6 A
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45

Item	Specification
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 2$ kV in differential mode, $\pm 4$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.25.6 S5731-S24T4X-D (98011860-001)

### Overview

**Table 4-1220** Basic information about the S5731-S24T4X-D

Item	Details
Description	S5731-S24T4X-D (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, DC power)
Part Number	98011860-001
Model	S5731-S24T4X-D
First supported version	V200R021C10SPC600
Supported Patch Version	If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch.

## Components

Figure 4-483 S5731-S24T4X-D appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	8	DC power terminal <b>NOTE</b> It is used with <b>DC Power Cable</b> .

## Ports

**Table 4-1221** Ports on the S5731-S24T4X-D

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive



Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

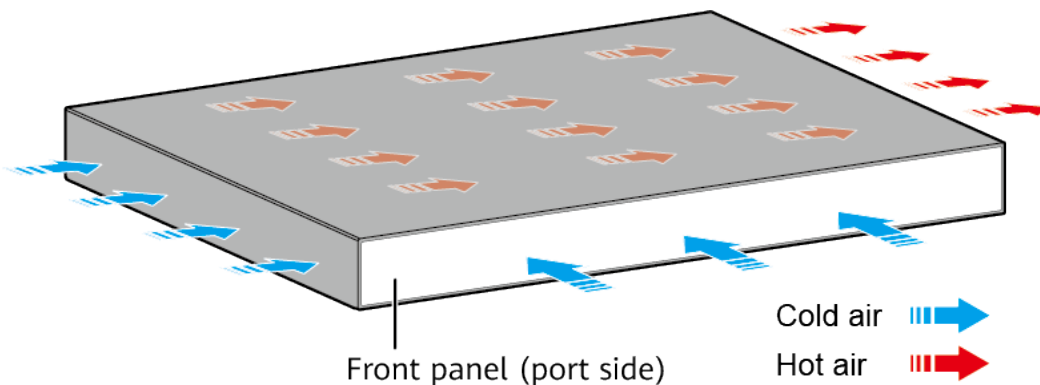
The S5731-S24T4X-D has the same types of indicators as the S5731-S48T4X-A. For details, see the S5731-S48T4X-A.

## Power Supply System

The switch has a built-in DC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1222** Technical specifications of the S5731-S24T4X-D

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.40 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 236.0 mm (1.72 in. x 17.40 in. x 9.29 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 355.0 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.26 kg (7.19 lb)
Weight with packaging [kg(lb)]	4.62 kg (10.19 lb)
Typical power consumption [W]	57 W
Typical heat dissipation [BTU/hour]	194.49 BTU/hour
Maximum power consumption [W]	76 W
Maximum heat dissipation [BTU/hour]	259.32 BTU/hour
Static power consumption [W]	42 W
MTBF [years]	47.34 years
MTTR [hours]	2 hours

Item	Specification
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	44.90 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.21 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). Devices cannot start when the temperature is lower than 0°C (32°F). The operating temperature of the switch is -5°C to +45°C (23°F to 113°F) when 10GE SFP+ optical modules with 40 km or longer transmission distances are used.
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	DC built-in
Rated input voltage [V]	-48 V DC to -60 V DC
Input voltage range [V]	-38.4 V DC to -72 V DC
Maximum input current [A]	6 A
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45

Item	Specification
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 2$ kV in differential mode, $\pm 4$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.25.7 S5731-S24P4X (02353AHX/02353AHX-001/02353AHX-003)

### Version Mapping

[Table 4-1223](#) lists the mapping between the S5731-S24P4X chassis and software versions.

**Table 4-1223** Version mapping

Series	Model	Software Version
S5731-S	S5731-S24P4X	02353AHX: V200R019C00 and later versions 02353AHX-001: V200R020C10 and later versions 02353AHX-003: V200R021C10SPC600 and later versions (If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch.)

## Appearance and Structure

Figure 4-484 S5731-S24P4X (02353AHX) appearance

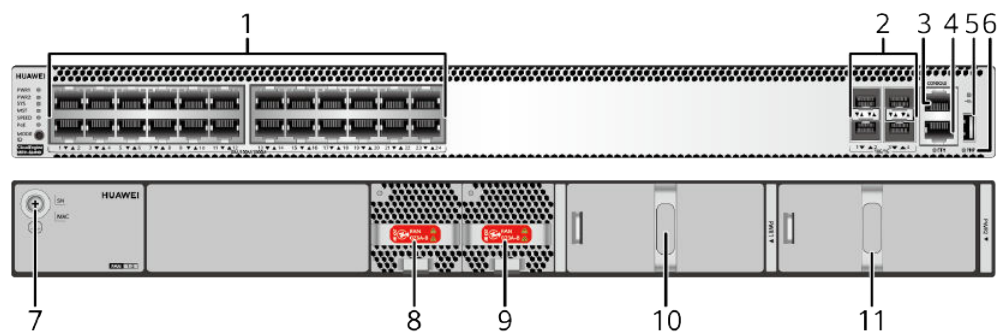
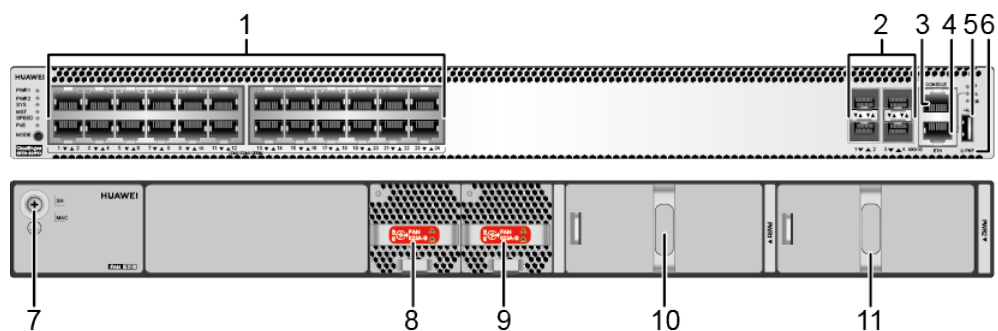


Figure 4-485 S5731-S24P4X (02353AHX-001/02353AHX-003) appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	8	<p>Fan module slot 1</p> <p><b>NOTE</b> Applicable fan module: <b>7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</b></p>

9	<p>Fan module slot 2</p> <p><b>NOTE</b></p> <p>Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	1 0	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a> (applicable in V200R021C10 and later versions)</li> </ul>
1 1	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a> (applicable in V200R021C10 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1224](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1224** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1225](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1225** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1226](#).

**Table 4-1226** Attributes of a console port

Attribute	Description
Connector type	RJ45



Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1227](#) describes the attributes of an ETH management port.

**Table 4-1227** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5731-S24P4X has the same types of indicators as the S5731-S48P4X. For details, see [Indicator Description](#).

## Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1228** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	760 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>
1000 W AC (110 V)	–	665 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 22</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	Versions earlier than V200R021C10: 1330 W V200R021C10 and later versions: 1520 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>
600 W AC (220 V)	–	380 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
600 W AC (110 V)	–	95 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 6</li> <li>802.3at (30 W per port): 3</li> </ul>

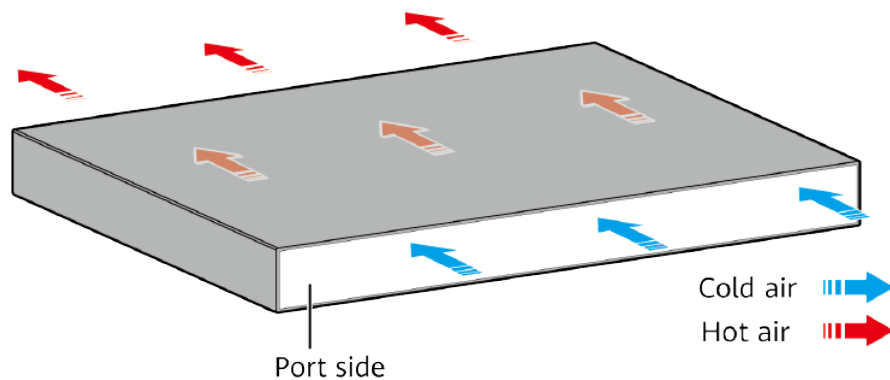
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
600 W AC (220 V)	600 W AC (220 V)	950 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>
600 W AC (110 V)	600 W AC (110 V)	380 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1330 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

## Heat Dissipation

The S5731-S24P4X uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



## Technical Specifications

[Table 4-1229](#) lists technical specifications of the S5731-S24P4X.

**Table 4-1229** Technical specifications

Item	Description
Memory (RAM)	2 GB

Item	Description
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	57.21 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)</li> </ul>
Weight (with packaging)	8.6 kg (18.96 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 121 W</li> <li>100% PoE loads: 977 W (PoE: 720 W)</li> </ul>

Item	Description
Typical power consumption (30% of traffic load, tested according to ATIS standard)	95 W
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 62.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>● EMC certification</li> <li>● Safety certification</li> <li>● Manufacturing certification</li> </ul>
Part number	02353AHX 02353AHX-001 02353AHX-003

## 4.25.8 S5731-S48T4X (02353AJB/02353AJB-003)

### Version Mapping

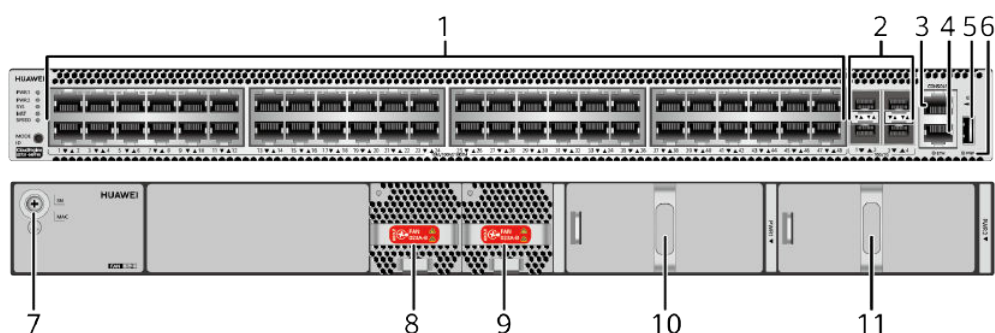
[Table 4-1230](#) lists the mapping between the S5731-S48T4X chassis and software versions.

**Table 4-1230** Version mapping

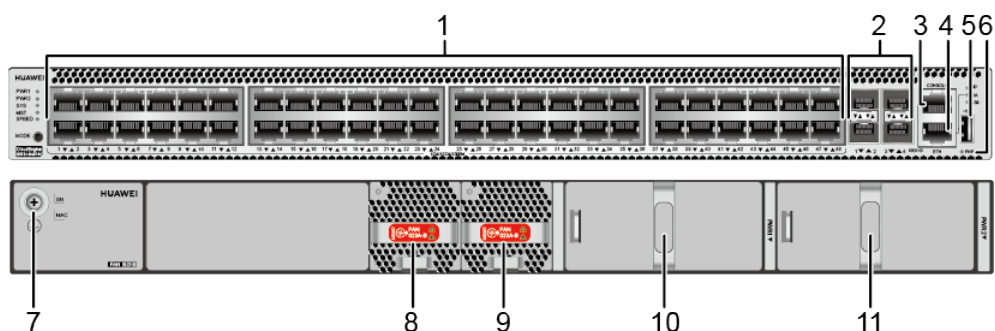
Series	Model	Software Version
S5731-S	S5731-S48T4X	02353AJB: V200R019C00 and later versions 02353AJB-003: V200R020C10 and later versions

## Appearance and Structure

**Figure 4-486** S5731-S48T4X (02353AJB) appearance



**Figure 4-487** S5731-S48T4X (02353AJB-003) appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	8	<p>Fan module slot 1</p> <p><b>NOTE</b> Applicable fan module: <b>7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</b></p>

9	<p>Fan module slot 2</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	1 0	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>
1 1	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1231](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1231** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45



Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1232](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1232** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1233](#).

**Table 4-1233** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1234](#) describes the attributes of an ETH management port.

**Table 4-1234** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

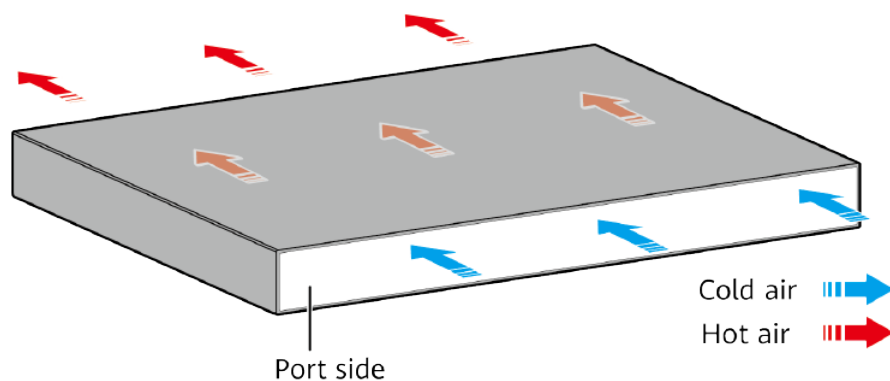
The S5731-S48T4X has similar indicators to those on the S5731-S48P4X except that the S5731-S48T4X does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation

The S5731-S48T4X uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1235](#) lists technical specifications of the S5731-S48T4X.

**Table 4-1235** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	55.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV

Item	Description
Power supply surge protection	<ul style="list-style-type: none"> <li>● Using AC power modules: ±6 kV in differential mode, ±6 kV in common mode</li> <li>● Using DC power modules: ±2 kV in differential mode, ±4 kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>● Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>● Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)</li> </ul>
Weight (with packaging)	8.55 kg (18.85 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>● AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>● High-Voltage DC input: 240 V DC</li> <li>● DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>● High-Voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	124 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	101 W

Item	Description
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02353AJB 02353AJB-003

## 4.25.9 S5731-S48T4X (98011847)

### Overview

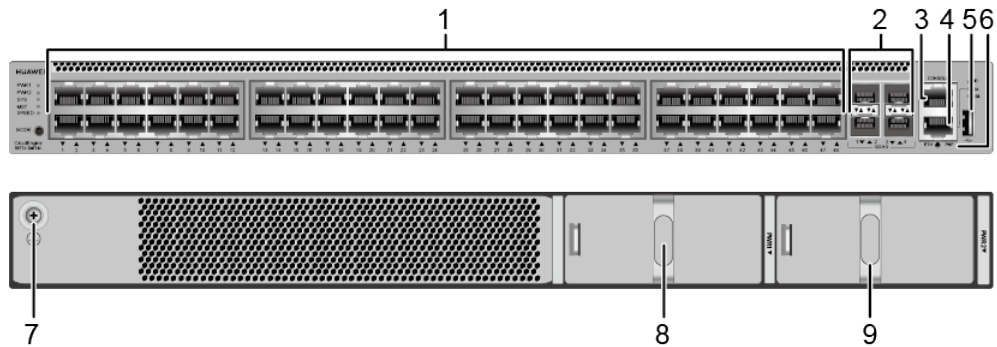
**Table 4-1236** Basic information about the S5731-S48T4X

Item	Details
Description	S5731-S48T4X (48*10/100/1000BASE-T ports,4*10GE SFP+ ports,without power module)
Part Number	98011847
Model	S5731-S48T4X
First supported version	V200R021C10SPC600

Item	Details
Supported Patch Version	If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch.

## Components

Figure 4-488 S5731-S48T4X appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ optical ports
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>
9	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>	-	-

## Ports

**Table 4-1237** Ports on the S5731-S48T4X

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules</b></li> <li>● <b>10GE-DWDM SFP+ optical modules</b></li> <li>● <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables</b></li> <li>● <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>



Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

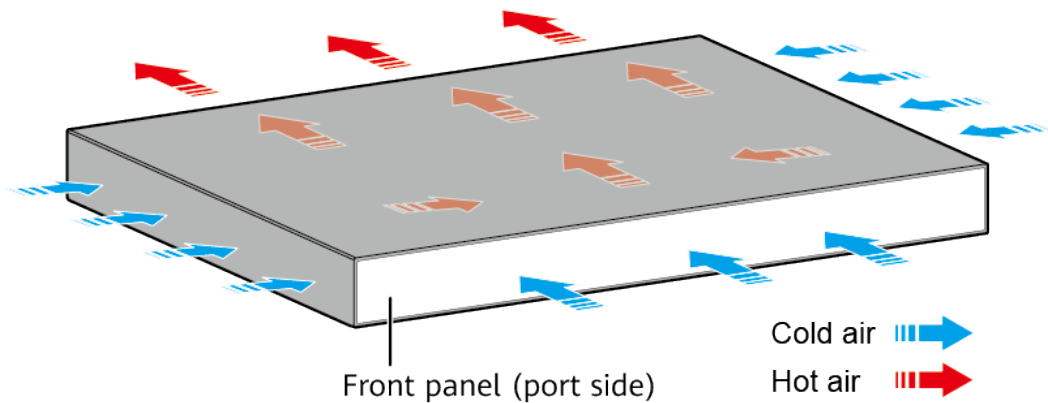
The S5731-S48T4X has similar indicators to those on the S5731-S48P4X except that the S5731-S48T4X does not have a PoE mode indicator. For details, see the S5731-S48P4X.

## Power Supply System

The switch can use a single power module or two power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1238** Technical specifications of the S5731-S48T4X

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	5.01 kg (11.05 lb)
Weight with packaging [kg(lb)]	7.54 kg (16.62 lb)
Typical power consumption [W]	78 W
Typical heat dissipation [BTU/hour]	266.14 BTU/hour
Maximum power consumption [W]	111 W
Maximum heat dissipation [BTU/hour]	378.74 BTU/hour
Static power consumption [W]	50 W
MTBF [years]	73.81 years
MTTR [hours]	2 hours

Item	Specification
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	45.62 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.94 dB(A)
Number of card slots	0
Number of power slots	2
Number of fans modules	2
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). Devices cannot start when the temperature is lower than 0°C (32°F). The operating temperature of the switch is -5°C to +45°C (23°F to 113°F) when 10GE SFP+ optical modules with 40 km or longer transmission distances are used.
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: -48 V DC to -60 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"><li>AC input: 90 V AC to 290 V AC; 45–65 Hz</li><li>High-voltage DC input: 190 V DC to 290 V DC</li><li>DC input: -38.4 V DC to -72 V DC</li></ul>
Maximum input current [A]	The current specifications depend on the pluggable power modules in use. For details, see the related power module specifications.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	<ul style="list-style-type: none"><li>Configured with AC power modules: <math>\pm 6</math> kV in differential mode and <math>\pm 6</math> kV in common mode</li><li>Configured with DC power modules: <math>\pm 2</math> kV in differential mode and <math>\pm 4</math> kV in common mode</li></ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air flows in from the left, right, and front, and flows out from the rear.
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.25.10 S5731-S48T4X-A (98011854)

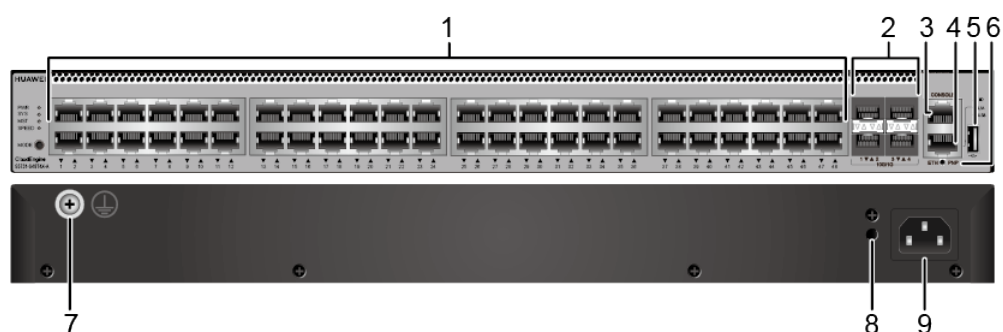
### Overview

**Table 4-1239** Basic information about the S5731-S48T4X-A

Item	Details
Description	S5731-S48T4X-A (48*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)
Part Number	98011854
Model	S5731-S48T4X-A
First supported version	V200R021C10SPC500

### Components

**Figure 4-489** S5731-S48T4X-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .	-	-

## Ports

**Table 4-1240** Ports on the S5731-S48T4X-A

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li><li>• <b>10GE-CWDM SFP+ optical modules</b></li><li>• <b>10GE-DWDM SFP+ optical modules</b></li><li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li><li>• <b>3 m and 10 m SFP+ AOC cables</b></li><li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li></ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

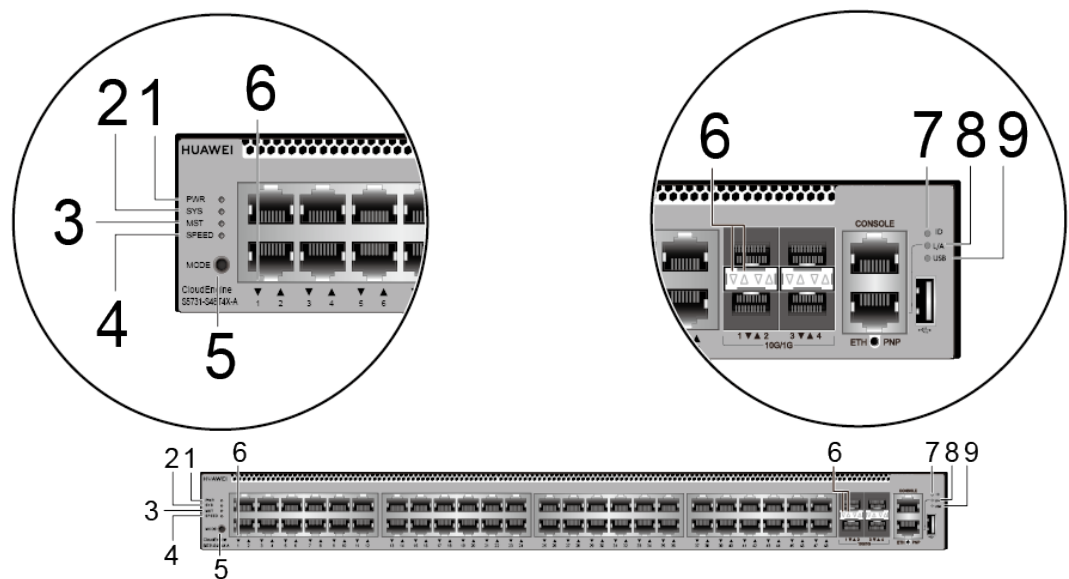


Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<b>Ethernet cable</b>

## Indicators and Buttons

Figure 4-490 Indicators on the S5731-S48T4X-A



**Table 4-1241** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.

No.	Indicator	Name	Color	Status	Description
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.

No.	Indicator	Name	Color	Status	Description
5	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a third time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED indicator is off.</p> <p><b>NOTE</b> Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> <li>If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows: <ul style="list-style-type: none"> <li>If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.</li> <li>If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.</li> </ul> </li> <li>If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.</li> </ul>

No.	Indicator	Name	Color	Status	Description
6	-	Electrical service port indicator (one indicator for each port)	Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1242</a> and <a href="#">Table 4-1243</a> .
		Optical service port indicator (two indicators for each port)	Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		
7	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
8	L/A	ETH port indicator	-	Off	The ETH port is not connected.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
9	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1242** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s.

**Table 4-1243** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode (LINK indicator)	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
Default mode (ACT indicator)	-	Off	The port is not connected or has been shut down, or no data is transmitted or received.
	Yellow	Blinking	The port is sending or receiving data.



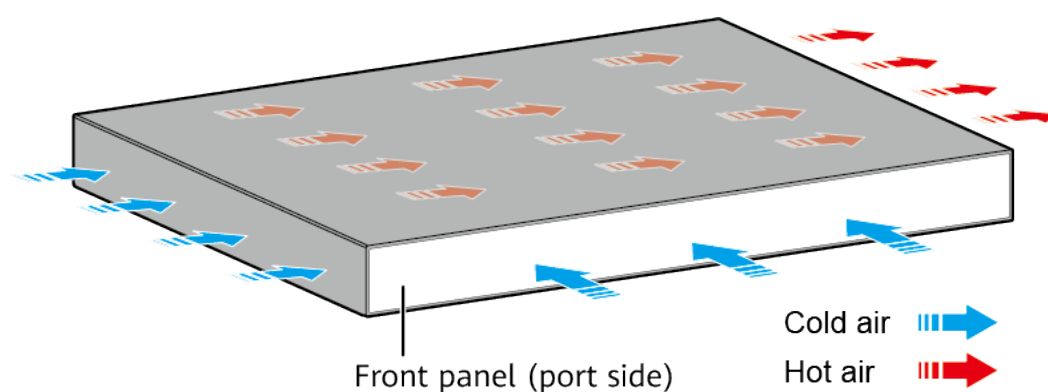
Display Mode	Color	Status	Description
Speed mode (LINK indicator)	-	Off	The port is not connected or has been shut down.
	Green	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s. 1000M port: The port is operating at 1000 Mbit/s.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1244** Technical specifications of the S5731-S48T4X-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 355.0 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.21 kg (7.08 lb)
Weight with packaging [kg(lb)]	4.57 kg (10.08 lb)
Typical power consumption [W]	76 W
Typical heat dissipation [BTU/hour]	259.32 BTU/hour
Maximum power consumption [W]	102 W
Maximum heat dissipation [BTU/hour]	348.03 BTU/hour
Static power consumption [W]	48 W
MTBF [years]	43.17 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	44.90 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.21 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). Devices cannot start when the temperature is lower than 0°C (32°F). The operating temperature of the switch is -5°C to +45°C (23°F to 113°F) when 10GE SFP+ optical modules with 40 km or longer transmission distances are used.
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	3 A
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ±7 kV
Power supply surge protection [kV]	±6 kV in differential mode, ±6 kV in common mode
Ingress protection level (dustproof/waterproof)	IP20

Item	Specification
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.25.11 S5731-S48T4X-A (98011854-001)

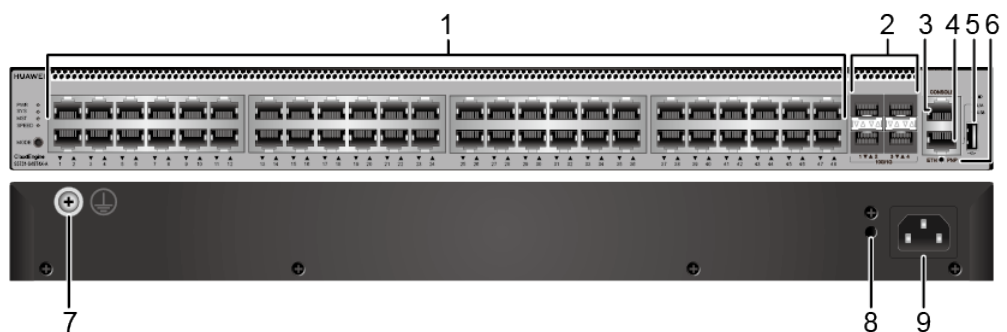
### Overview

**Table 4-1245** Basic information about the S5731-S48T4X-A

Item	Details
Description	S5731-S48T4X-A (48*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)
Part Number	98011854-001
Model	S5731-S48T4X-A
First supported version	V200R021C10SPC600
Supported Patch Version	If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch.

### Components

**Figure 4-491** S5731-S48T4X-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Ports

**Table 4-1246** Ports on the S5731-S48T4X-A

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

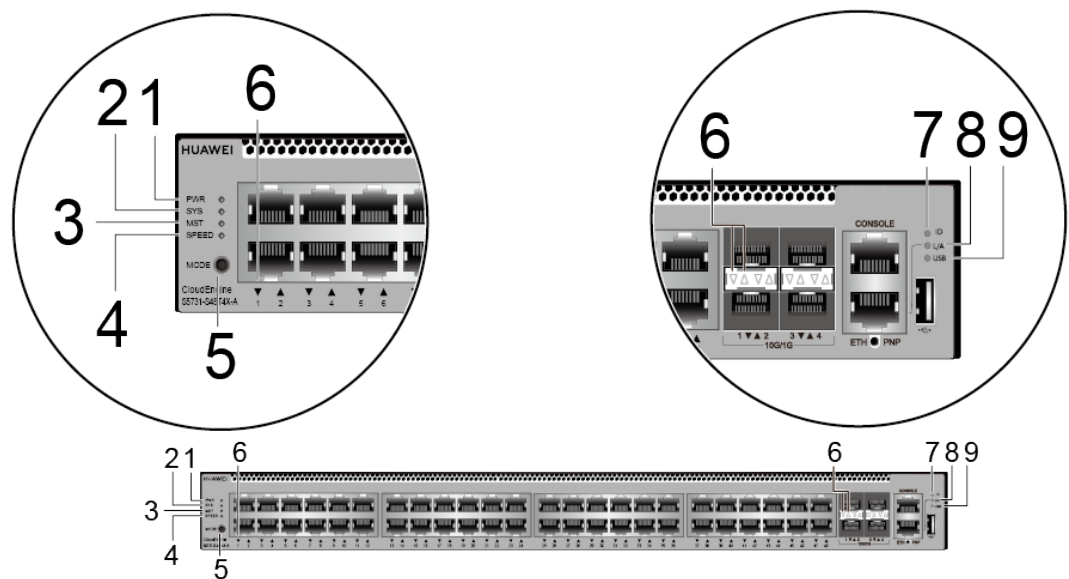
Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <a href="#">GE eSFP optical modules</a></li> <li>• <a href="#">GE-CWDM eSFP optical modules</a></li> <li>• <a href="#">GE-DWDM eSFP optical modules</a></li> <li>• <a href="#">GE SFP copper module</a></li> <li>• <a href="#">10GE SFP+ optical modules (OSXD22N00 not supported)</a></li> <li>• <a href="#">10GE-CWDM SFP+ optical modules</a></li> <li>• <a href="#">10GE-DWDM SFP+ optical modules</a></li> <li>• <a href="#">1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</a></li> <li>• <a href="#">3 m and 10 m SFP+ AOC cables</a></li> <li>• <a href="#">0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</a></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<b>Ethernet cable</b>

## Indicators and Buttons

Figure 4-492 Indicators on the S5731-S48T4X-A





**Table 4-1247** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.

No.	Indicator	Name	Color	Status	Description
			Green	Blinking	<ul style="list-style-type: none"><li>• If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li><li>• If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li></ul>
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.

No.	Indicator	Name	Color	Status	Description
5	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a third time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED indicator is off.</p> <p><b>NOTE</b> Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> <li>If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows: <ul style="list-style-type: none"> <li>If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.</li> <li>If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.</li> </ul> </li> <li>If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.</li> </ul>

No.	Indicator	Name	Color	Status	Description
6	-	Electrical service port indicator (one indicator for each port)	Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1248</a> and <a href="#">Table 4-1249</a> .
		Optical service port indicator (two indicators for each port)	Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		
7	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
8	L/A	ETH port indicator	-	Off	The ETH port is not connected.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
9	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1248** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s.

**Table 4-1249** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode (LINK indicator)	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
Default mode (ACT indicator)	-	Off	The port is not connected or has been shut down, or no data is transmitted or received.
	Yellow	Blinking	The port is sending or receiving data.

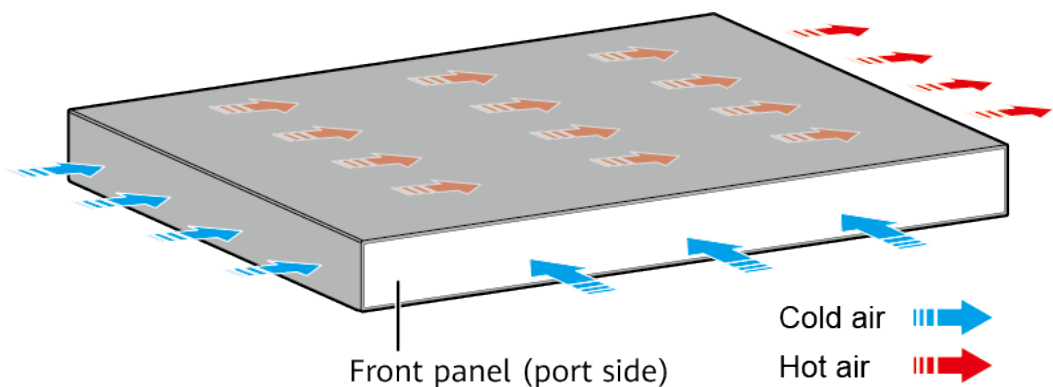
Display Mode	Color	Status	Description
Speed mode (LINK indicator)	-	Off	The port is not connected or has been shut down.
	Green	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s. 1000M port: The port is operating at 1000 Mbit/s.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1250** Technical specifications of the S5731-S48T4X-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 355.0 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.21 kg (7.08 lb)
Weight with packaging [kg(lb)]	4.57 kg (10.08 lb)
Typical power consumption [W]	76 W
Typical heat dissipation [BTU/hour]	259.32 BTU/hour
Maximum power consumption [W]	102 W
Maximum heat dissipation [BTU/hour]	348.03 BTU/hour
Static power consumption [W]	48 W
MTBF [years]	43.17 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	44.90 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.21 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)



Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). Devices cannot start when the temperature is lower than 0°C (32°F). The operating temperature of the switch is -5°C to +45°C (23°F to 113°F) when 10GE SFP+ optical modules with 40 km or longer transmission distances are used.
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100-240 V AC; 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	3 A
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ±7 kV
Power supply surge protection [kV]	Differential mode: ±6 kV; common mode: ±6 kV
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in

Item	Specification
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.25.12 S5731-S48P4X (02353AJH/02353AJH-001/02353AJH-003)

### Version Mapping

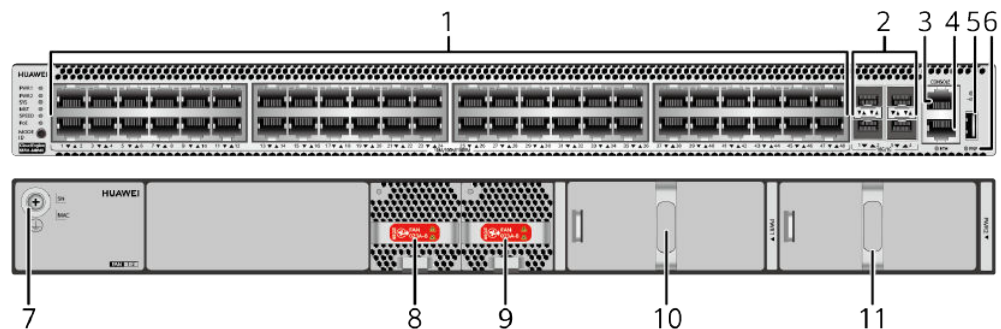
**Table 4-1251** lists the mapping between the S5731-S48P4X chassis and software versions.

**Table 4-1251** Version mapping

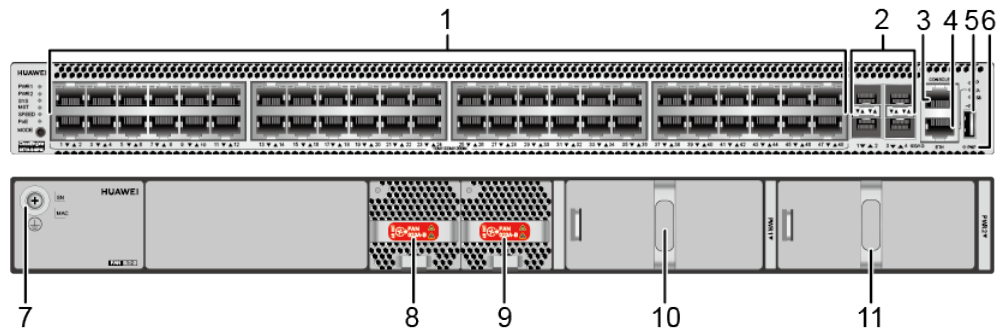
Series	Model	Software Version
S5731-S	S5731-S48P4X	02353AJH: V200R019C00 and later versions 02353AJH-001: V200R020C10 and later versions 02353AJH-003: V200R021C10SPC600 and later versions (If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch.)

### Appearance and Structure

**Figure 4-493** S5731-S48P4X (02353AJH) appearance



**Figure 4-494** S5731-S48P4X (02353AJH-001/02353AJH-003) appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Fan module slot 1</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>
9	<p>Fan module slot 2</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	10	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a> (applicable in V200R021C10 and later versions)</li> </ul>
11	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a> (applicable in V200R021C10 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1252](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1252** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1253](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1253** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1254](#).

**Table 4-1254** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1255](#) describes the attributes of an ETH management port.

**Table 4-1255** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

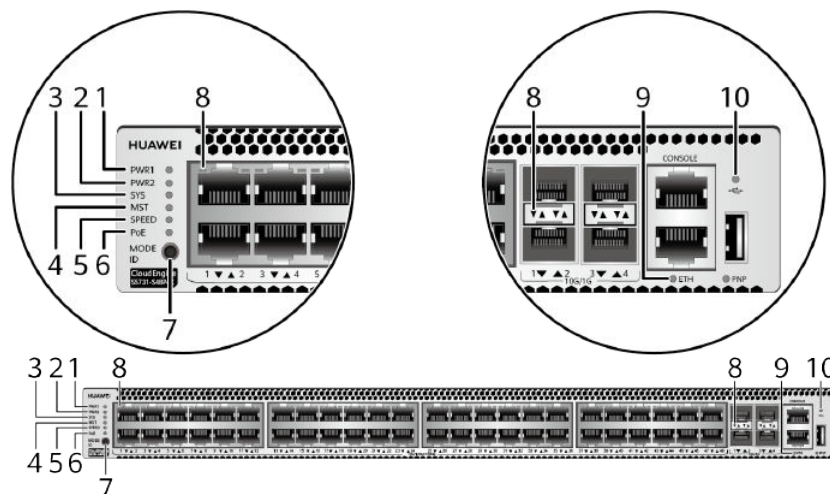
## Indicator Description

 NOTE

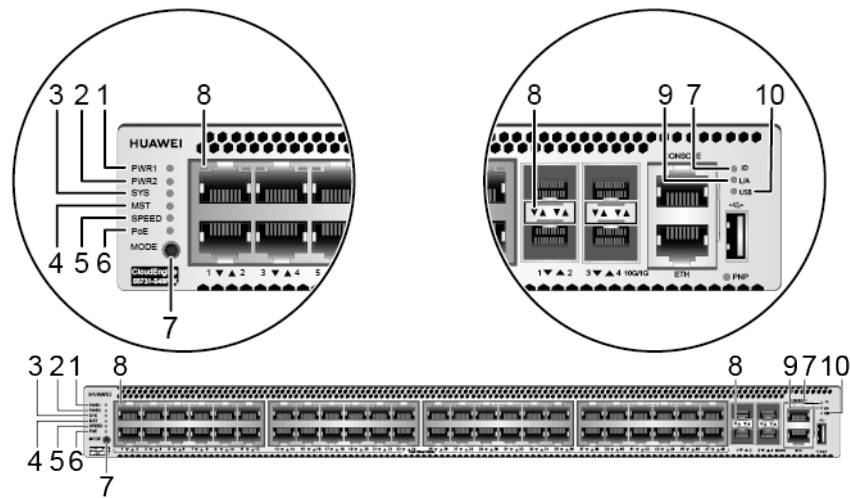
Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-495** Indicators on the S5731-S48P4X (02353AJH)



**Figure 4-496** Indicators on the S5731-S48P4X (02353AJH-001/02353AJH-003)



**Table 4-1256** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.



No.	Indicator	Name	Color	Status	Description
			Yellow	Steady on	<p>The switch has two power modules installed. Any of the following situations occurs in power module slot 2:</p> <ul style="list-style-type: none"> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>• If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>• If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.

No.	Indicator	Name	Color	Status	Description
			Green	Blinking	<ul style="list-style-type: none"><li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li><li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li></ul>
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p>
	ID	ID indicator <b>NOTE</b> The mode switch button on the 02353AJ H has an ID indicator.	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.

No.	Indicator	Name	Color	Status	Description
8	-	Electrical service port indicator (one indicator for each port)	The indicator in the upper left corner of a port indicates the indicator of a port at the top, and the indicator in the upper right corner indicates the indicator of a port at the bottom.		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1257</a> and <a href="#">Table 4-1258</a> .
		Optical service port indicator (two indicators for each port)	Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		
9	ETH	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.

No.	Indicator	Name	Color	Status	Description
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1257** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	Green	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
		Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
		Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.

**Table 4-1258** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s. 1000M port: The port is operating at 1000 Mbit/s.

## Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1259** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	-	760 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 25</li> </ul>
1000 W AC (110 V)	-	665 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 43</li> <li>802.3at (30 W per port): 22</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	Versions earlier than V200R021C10: 1330 W V200R021C10 and later versions: 1520 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>

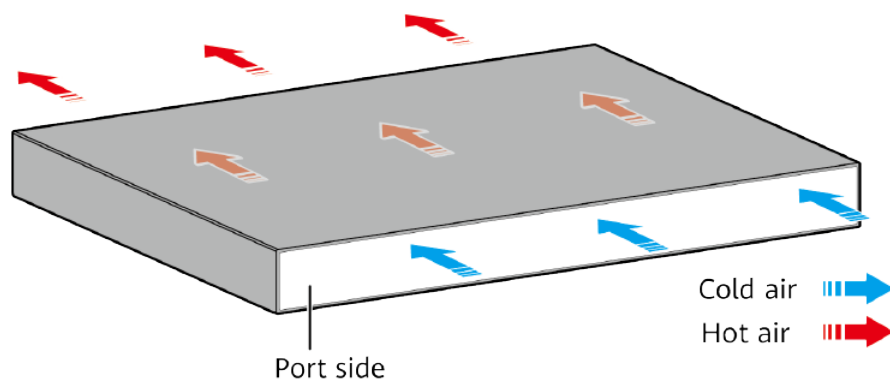
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
600 W AC (220 V)	-	380 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 24</li><li>802.3at (30 W per port): 12</li></ul>
600 W AC (110 V)	-	95 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 6</li><li>802.3at (30 W per port): 3</li></ul>
600 W AC (220 V)	600 W AC (220 V)	950 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 48</li><li>802.3at (30 W per port): 31</li></ul>
600 W AC (110 V)	600 W AC (110 V)	380 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 24</li><li>802.3at (30 W per port): 12</li></ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1330 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 48</li><li>802.3at (30 W per port): 44</li></ul>

**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

## Heat Dissipation

The S5731-S48P4X uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.





 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1260](#) lists technical specifications of the S5731-S48P4X.

**Table 4-1260** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	54.96 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)</li> </ul>
Weight (with packaging)	8.8 kg (19.40 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported

Item	Description
Rated voltage range	<ul style="list-style-type: none"> <li>● AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>● High-Voltage DC input: 240 V DC</li> <li>● DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>● High-Voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>● Not providing the PoE function: 132 W</li> <li>● 100% PoE loads: 1750 W (PoE: 1440 W)</li> </ul>
Typical power consumption (30% of traffic load, tested according to ATIS standard)	108 W
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b>                      When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                      The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 62.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>● EMC certification</li> <li>● Safety certification</li> <li>● Manufacturing certification</li> </ul>

Item	Description
Part number	02353AJH 02353AJH-001 02353AJH-003

## 4.25.13 S5731-S32ST4X (98011813)

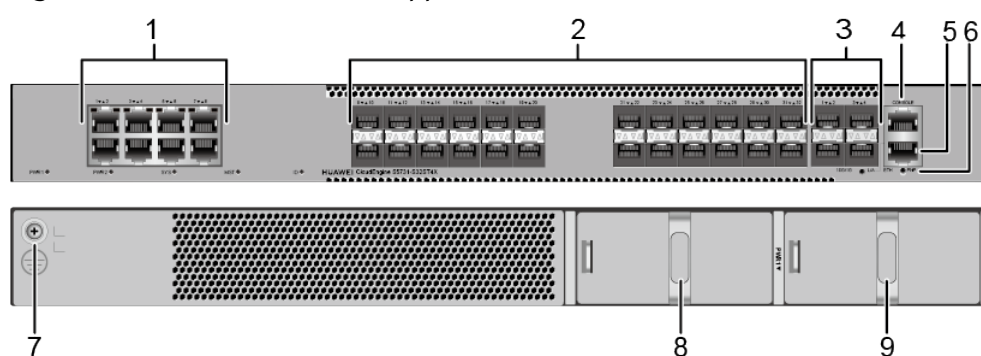
### Overview

**Table 4-1261** Basic information about the S5731-S32ST4X

Item	Details
Description	S5731-S32ST4X(8*10/100/1000BASE-T ports, 24*GE SFP ports, 4*10GE SFP+ ports, without power module)
Part Number	98011813
Model	S5731-S32ST4X
First supported version	V200R021C01

### Components

**Figure 4-497** S5731-S32ST4X appearance



1	Eight 10/100/1000BASE-T ports	2	Twenty-four 100/1000BASE-X ports <b>NOTE</b> In V200R023C00 and later versions, 100/1000BASE-X ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.
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3	Four 10GE SFP+ ports	4	One console port
5	One ETH management port	6	One PNP button  <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw  <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Power module slot 1  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>
9	Power module slot 2  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>	-	-

## Ports

**Table 4-1262** Ports on the S5731-S32ST4X

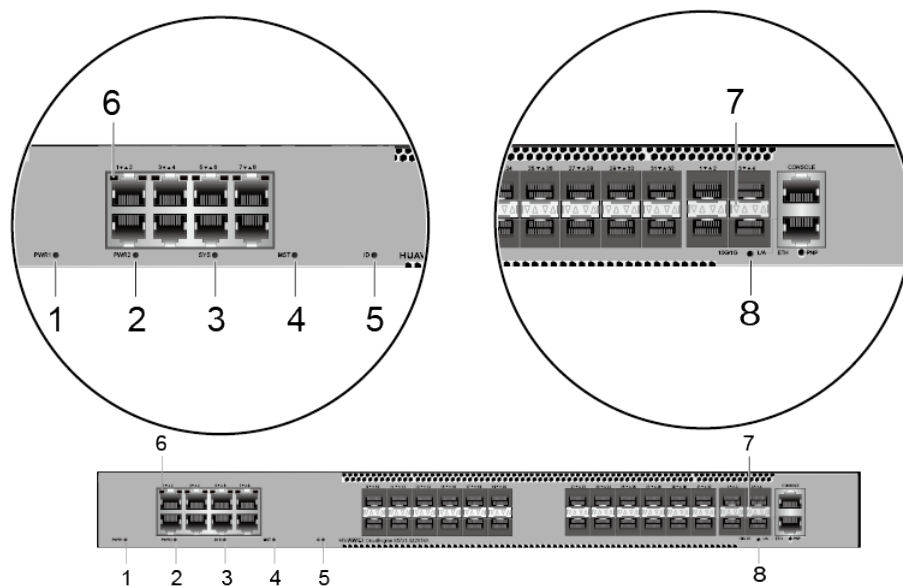
Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>
100/1000BASE-X port	SFP	<p>A 100/1000BASE-X port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s.</p> <p>In V200R023C00 and later versions, 100/1000BASE-X ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"><li>• <a href="#">FE SFP/eSFP optical modules</a></li><li>• <a href="#">GE eSFP optical modules</a></li><li>• <a href="#">GE-CWDM eSFP optical modules</a></li><li>• <a href="#">GE-DWDM eSFP optical modules</a></li><li>• <a href="#">GE SFP copper module</a></li><li>• <a href="#">2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</a></li></ul>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<b>Ethernet cable</b>

## Indicators and Buttons

**Figure 4-498** Indicators on the S5731-S32ST4X



**Table 4-1263** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.



No.	Indicator	Name	Color	Status	Description
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	The switch is not the master switch in a stack.
			Green	Blinking	The switch is the master switch in a stack or a standalone switch.
5	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
6	-	Service port indicator (electrical port) The indicator in the upper left corner of a port indicates the indicator of a port at the top, and the indicator in the upper right	-	Off	The port is not connected or has been shut down.
			Green	Steady on	A link has been established on the port.

No.	Indicator	Name	Color	Status	Description
		corner indicates the indicator of a port at the bottom.		Blinking	The port is sending or receiving data.
7	-	Service port indicator (optical port)  Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead	Green	Off	The port is not connected or has been shut down.
				Steady on	A link has been established on the port.
			Yellow	Off	The port is not sending or receiving data.

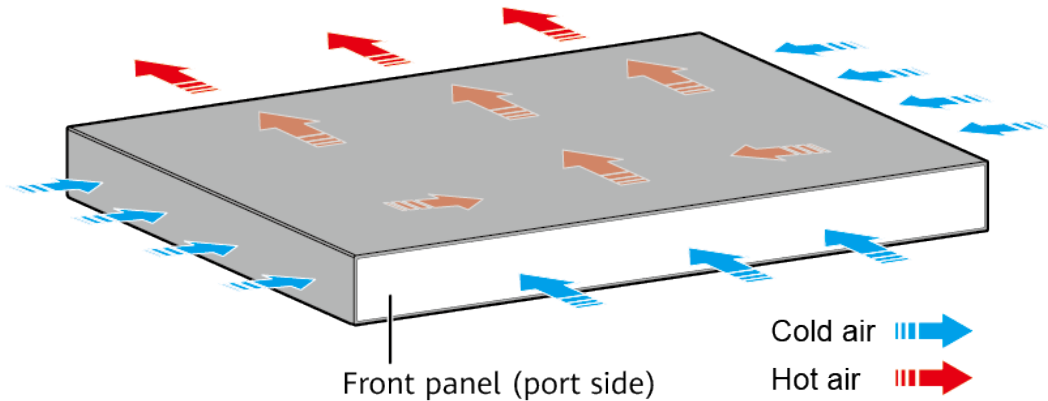
No.	Indicator	Name	Color	Status	Description
		indicates a port at the top. <b>NOTE</b> If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.		Blinking	The port is sending or receiving data.
8	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The Eth port is sending or receiving data.

## Power Supply System

The switch can use a single power module or two power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation System

The switch has three built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1264** Technical specifications of the S5731-S32ST4X

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.40 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.40 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	4.9 kg (10.8 lb)
Weight with packaging [kg(lb)]	7.43 kg (16.38 lb)
Typical power consumption [W]	73.56 W
Typical heat dissipation [BTU/hour]	250.99 BTU/hour
Maximum power consumption [W]	104.82 W (150 W AC or 180 W DC) 119.23 W (600 W AC)

Item	Specification
Maximum heat dissipation [BTU/hour]	357.66 (150 W AC or 180 W DC) 406.82 (600 W AC)
Static power consumption [W]	44.5 W
MTBF [years]	71.54 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	45.47 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.79 dB(A)
Number of card slots	0
Number of power slots	2
Number of fans modules	3
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: -48 V DC to -60 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"><li>AC input: 90 V AC to 290 V AC; 45 Hz to 65 Hz</li><li>High-voltage DC input: 190 V DC to 290 V DC</li><li>DC input: -38.4 V DC to -72 V DC</li></ul>
Maximum input current [A]	The current specifications depend on the pluggable power modules in use. For details, see the related power module specifications.
Memory	2 GB
Flash memory	The physical space is 1 GB. You can run the display version command to view the actual available space.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	<ul style="list-style-type: none"><li>Configured with AC power modules: <math>\pm 6</math> kV in differential mode and <math>\pm 6</math> kV in common mode</li><li>Configured with DC power modules: <math>\pm 2</math> kV in differential mode and <math>\pm 4</math> kV in common mode</li></ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left, front and right, air exhaustion from behind
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.25.14 S5731-S32ST4X (98011813-002)

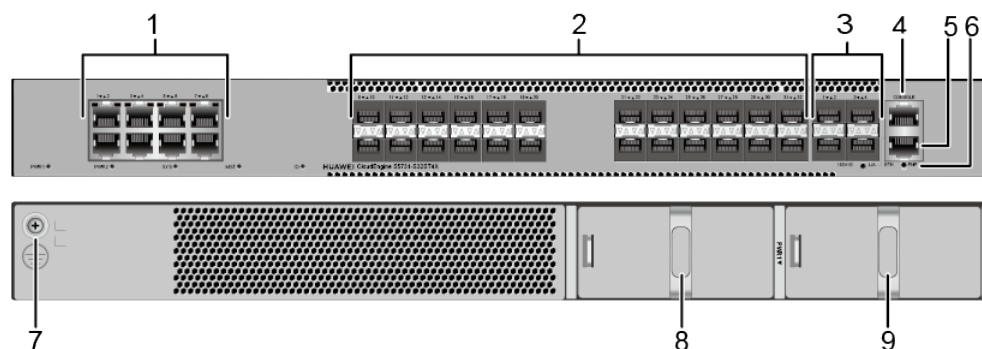
### Overview

**Table 4-1265** Basic information about the S5731-S32ST4X

Item	Details
Description	S5731-S32ST4X(8*10/100/1000BASE-T ports, 24*GE SFP ports, 4*10GE SFP+ ports, without power module)
Part Number	98011813-002
Model	S5731-S32ST4X
First supported version	V200R021C10SPC600

### Components

**Figure 4-499** S5731-S32ST4X appearance



1	Eight 10/100/1000BASE-T ports	2	Twenty-four 100/1000BASE-X ports <b>NOTE</b> In V200R023C00 and later versions, 100/1000BASE-X ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.
3	Four 10GE SFP+ ports	4	One console port



5	One ETH management port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>
9	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>	-	-

## Ports

**Table 4-1266** Ports on the S5731-S32ST4X

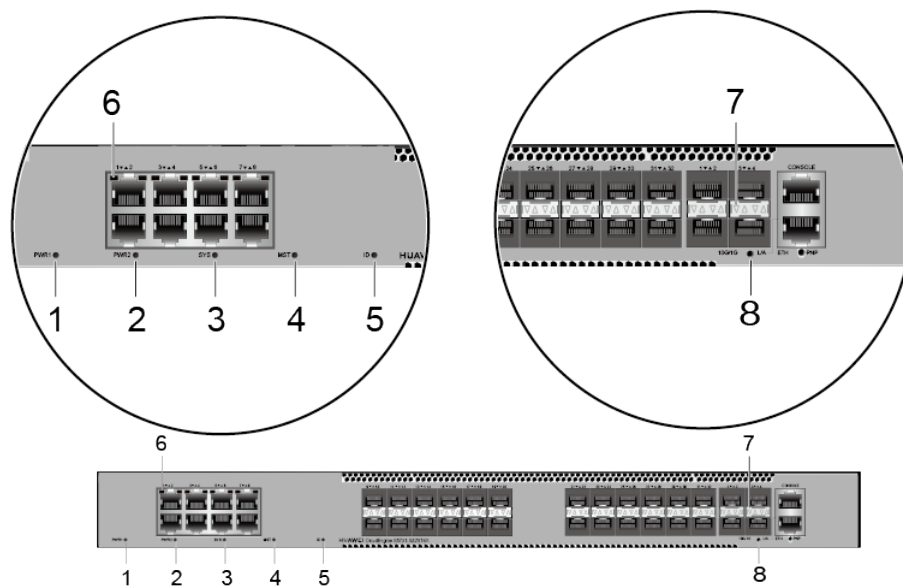
Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s.  In V200R023C00 and later versions, 100/1000BASE-X ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.	<ul style="list-style-type: none"> <li>• <b>FE SFP/eSFP optical modules</b></li> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</b></li> </ul>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li><li>• <b>10GE-CWDM SFP+ optical modules</b></li><li>• <b>10GE-DWDM SFP+ optical modules</b></li><li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li><li>• <b>3 m and 10 m SFP+ AOC cables</b></li><li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li></ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

Figure 4-500 Indicators on the S5731-S32ST4X



**Table 4-1267** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	The switch is not the master switch in a stack.
			Green	Blinking	The switch is the master switch in a stack or a standalone switch.
5	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
6	-	Service port indicator (electrical port) The indicator in the upper left corner of a port indicates the indicator of a port at the top, and the indicator in the upper right	-	Off	The port is not connected or has been shut down.
			Green	Steady on	A link has been established on the port.

No.	Indicator	Name	Color	Status	Description
		corner indicates the indicator of a port at the bottom.		Blinking	The port is sending or receiving data.
7	-	Service port indicator (optical port)  Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead	Green	Off	The port is not connected or has been shut down.
				Steady on	A link has been established on the port.
			Yellow	Off	The port is not sending or receiving data.

No.	Indicator	Name	Color	Status	Description
		indicates a port at the top. <b>NOTE</b> If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.		Blinking	The port is sending or receiving data.
8	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The Eth port is sending or receiving data.

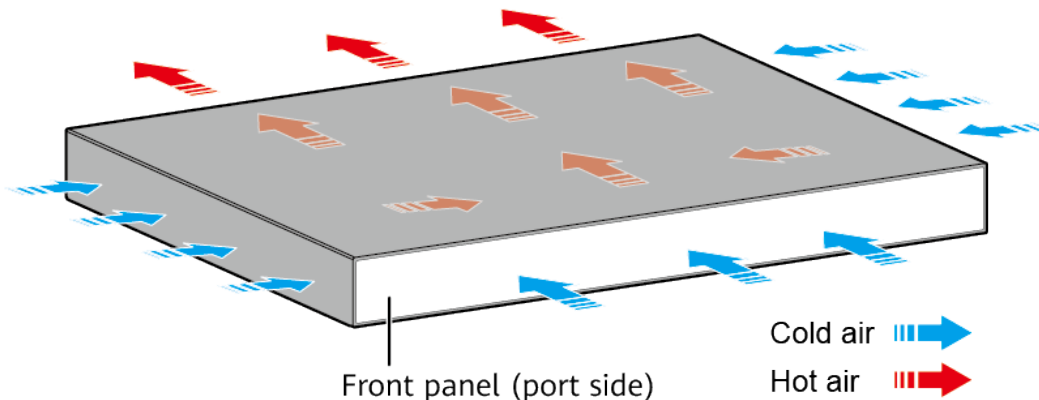
## Power Supply System

The switch can use a single power module or two power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.



## Heat Dissipation System

The switch has three built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1268** Technical specifications of the S5731-S32ST4X

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	4.9 kg (10.8 lb)
Weight with packaging [kg(lb)]	7.43 kg (16.38 lb)
Typical power consumption [W]	73.56 W
Typical heat dissipation [BTU/hour]	250.99 BTU/hour
Maximum power consumption [W]	104.82 W (150 W AC or 180 W DC) 119.23 W (600 W AC)

Item	Specification
Maximum heat dissipation [BTU/hour]	357.66 (150 W AC or 180 W DC) 406.82 (600 W AC)
Static power consumption [W]	44.5 W
MTBF [years]	71.54 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	45.47 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.79 dB(A)
Number of card slots	0
Number of power slots	2
Number of fans modules	3
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.44 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	–40°C to +70°C (–40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Storage altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: –48 V DC to –60 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC; 45–65 Hz</li> <li>High-voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum input current [A]	The current specifications are related to the pluggable power module. For details, see Pluggable Power Modules.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	<ul style="list-style-type: none"> <li>Configured with AC power modules: <math>\pm 6</math> kV in differential mode and <math>\pm 6</math> kV in common mode</li> <li>Configured with DC power modules: <math>\pm 2</math> kV in differential mode and <math>\pm 4</math> kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from left, front, and right and air exhaust from rear
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.25.15 S5731-S32ST4X-A (98011808)

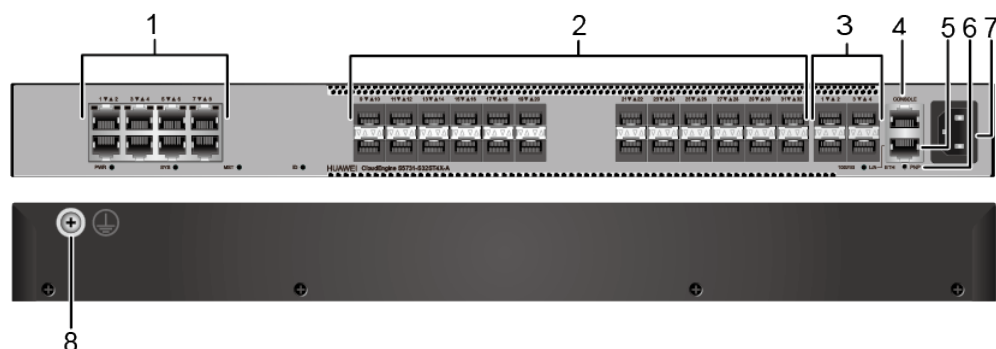
### Overview

Table 4-1269 Basic information about the S5731-S32ST4X-A

Item	Details
Description	S5731-S32ST4X-A(8*10/100/1000BASE-T ports, 24*GE SFP ports, 4*10GE SFP+ ports, AC power, front access)
Part Number	98011808
Model	S5731-S32ST4X-A
First supported version	V200R021C01

### Components

Figure 4-501 S5731-S32ST4X-A appearance



1	Eight 10/100/1000BASE-T ports	2	Twenty-four 100/1000BASE-X ports <b>NOTE</b> In V200R023C00 and later versions, 100/1000BASE-X ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.
3	Four 10GE SFP+ ports	4	One console port

5	One ETH management port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	8	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .

## Ports

**Table 4-1270** Ports on the S5731-S32ST4X-A

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
100/1000BASE-X port	SFP	<p>A 100/1000BASE-X port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s.</p> <p>In V200R023C00 and later versions, 100/1000BASE-X ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"> <li>● <a href="#">FE SFP/eSFP optical modules</a></li> <li>● <a href="#">GE eSFP optical modules</a></li> <li>● <a href="#">GE-CWDM eSFP optical modules</a></li> <li>● <a href="#">GE-DWDM eSFP optical modules</a></li> <li>● <a href="#">GE SFP copper module</a></li> <li>● <a href="#">2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</a></li> </ul>

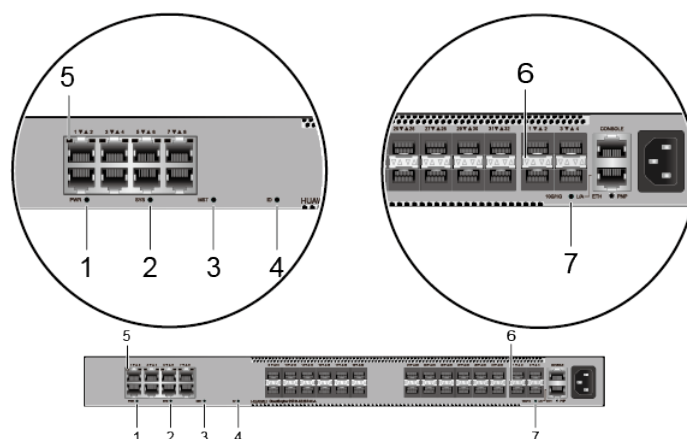
Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules</b></li> <li>● <b>10GE-DWDM SFP+ optical modules</b></li> <li>● <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables</b></li> <li>● <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>



Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

Figure 4-502 Indicators on the S5731-S32ST4X-A



**Table 4-1271** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
3	MST	Stack indicator	-	Off	The switch is not the master switch in a stack.
			Green	Blinking	The switch is the master switch in a stack or a standalone switch.
4	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
5	-	Service port indicator (electrical port) The indicator in the upper left corner of a port	-	Off	The port is not connected or has been shut down.
			Green	Steady on	A link has been established on the port.

No.	Indicator	Name	Color	Status	Description
		indicates the indicator of a port at the top, and the indicator in the upper right corner indicates the indicator of a port at the bottom.		Blinking	The port is sending or receiving data.
6	-	Service port indicator (optical port)  Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports.	Green	Off	The port is not connected or has been shut down.
				Steady on	A link has been established on the port.
			Yellow	Off	The port is not sending or receiving data.

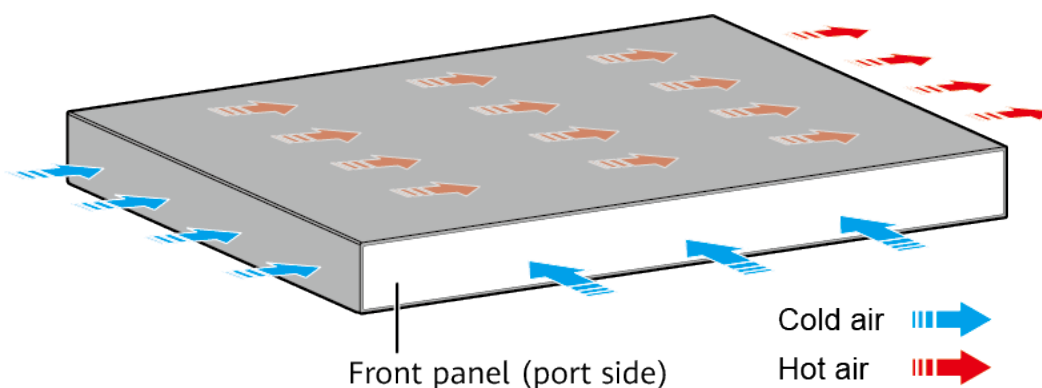
No.	Indicator	Name	Color	Status	Description
		<p>A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.</p> <p><b>NOTE</b> If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.</p>		Blinking	The port is sending or receiving data.
7	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The Eth port is sending or receiving data.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1272** Technical specifications of the S5731-S32ST4X-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.40 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.40 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90 mm x 550 mm x 355 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.13 kg (6.9 lb)
Weight with packaging [kg(lb)]	4.49 kg (9.9 lb)

Item	Specification
Typical power consumption [W]	66.85 W
Typical heat dissipation [BTU/hour]	228.10 BTU/hour
Maximum power consumption [W]	93.92 W
Maximum heat dissipation [BTU/hour]	320.46 BTU/hour
Static power consumption [W]	41.71 W
MTBF [years]	32.56 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	41.42 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.74 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"><li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li><li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li><li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li></ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	- AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	- AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	3 A
Memory	2 GB

Item	Specification
Flash memory	The physical space is 1 GB. You can run the display version command to view the actual available space.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode; $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.25.16 S5731-S32ST4X-A (98011808-001)

### Overview

**Table 4-1273** Basic information about the S5731-S32ST4X-A

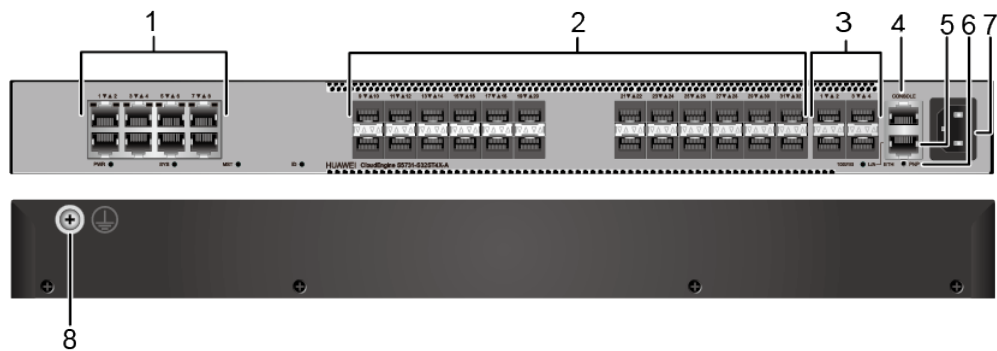
Item	Details
Description	S5731-S32ST4X-A(8*10/100/1000BASE-T ports, 24*GE SFP ports, 4*10GE SFP+ ports, AC power, front access)
Part Number	98011808-001



Item	Details
Model	S5731-S32ST4X-A
First supported version	V200R021C10SPC600

## Components

Figure 4-503 S5731-S32ST4X-A appearance



1	Eight 10/100/1000BASE-T ports	2	Twenty-four 100/1000BASE-X ports <b>NOTE</b> In V200R023C00 and later versions, 100/1000BASE-X ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.
3	Four 10GE SFP+ ports	4	One console port
5	One ETH management port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .	8	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .

## Ports

**Table 4-1274** Ports on the S5731-S32ST4X-A

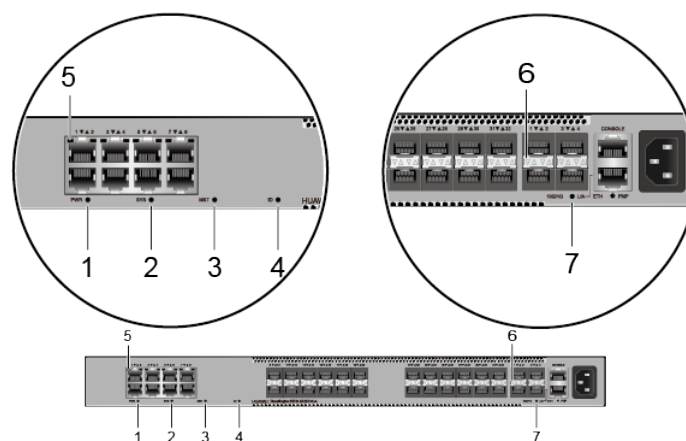
Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s.  In V200R023C00 and later versions, 100/1000BASE-X ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.	<ul style="list-style-type: none"><li>• <b>FE SFP/eSFP optical modules</b></li><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</b></li></ul>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

**Figure 4-504** Indicators on the S5731-S32ST4X-A



**Table 4-1275** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
3	MST	Stack indicator	-	Off	The switch is not the master switch in a stack.
			Green	Blinking	The switch is the master switch in a stack or a standalone switch.
4	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
5	-	Service port indicator (electrical port) The indicator in the upper left corner of a port	-	Off	The port is not connected or has been shut down.
			Green	Steady on	A link has been established on the port.

No.	Indicator	Name	Color	Status	Description
		indicates the indicator of a port at the top, and the indicator in the upper right corner indicates the indicator of a port at the bottom.		Blinking	The port is sending or receiving data.
6	-	Service port indicator (optical port)  Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports.	Green	Off	The port is not connected or has been shut down.
				Steady on	A link has been established on the port.
			Yellow	Off	The port is not sending or receiving data.

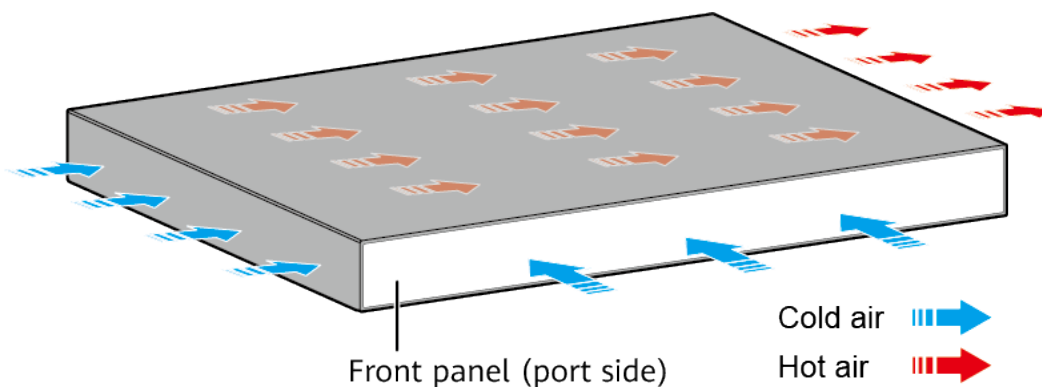
No.	Indicator	Name	Color	Status	Description
		A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top. <b>NOTE</b> If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.		Blinking	The port is sending or receiving data.
7	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The Eth port is sending or receiving data.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1276** Technical specifications of the S5731-S32ST4X-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90 mm x 550 mm x 355 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.13 kg (6.9 lb)
Weight with packaging [kg(lb)]	4.49 kg (9.9 lb)



Item	Specification
Typical power consumption [W]	66.85 W
Typical heat dissipation [BTU/hour]	228.10 BTU/hour
Maximum power consumption [W]	93.92 W
Maximum heat dissipation [BTU/hour]	320.46 BTU/hour
Static power consumption [W]	41.71 W
MTBF [years]	32.56 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	41.42 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.74 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.44 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	–40°C to +70°C (–40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Storage altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	- AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	- AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	3 A
Memory	2 GB

Item	Specification
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	Differential mode: $\pm 6$ kV; common mode: $\pm 6$ kV
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.25.17 S5731-S32ST4X-D (98011810)

### Overview

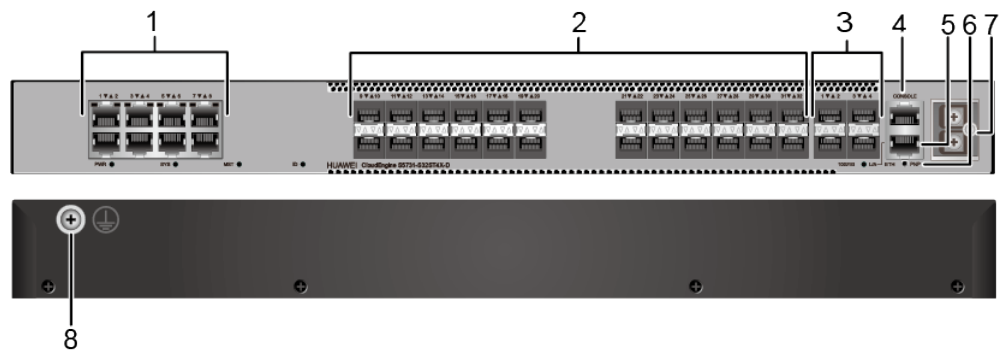
**Table 4-1277** Basic information about the S5731-S32ST4X-D

Item	Details
Description	S5731-S32ST4X-D(8*10/100/1000BASE-T ports, 24*GE SFP ports, 4*10GE SFP+ ports, DC power, front access)
Part Number	98011810

Item	Details
Model	S5731-S32ST4X-D
First supported version	V200R021C01

## Components

Figure 4-505 S5731-S32ST4X-D appearance



1	Eight 10/100/1000BASE-T ports	2	Twenty-four 100/1000BASE-X ports <b>NOTE</b> In V200R023C00 and later versions, 100/1000BASE-X ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.
3	Four 10GE SFP+ ports	4	One console port
5	One ETH management port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	DC power terminal <b>NOTE</b> It is used with <a href="#">DC Power Cable</a> .	8	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .

## Ports

**Table 4-1278** Ports on the S5731-S32ST4X-D

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s.  In V200R023C00 and later versions, 100/1000BASE-X ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.	<ul style="list-style-type: none"><li>• <b>FE SFP/eSFP optical modules</b></li><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</b></li></ul>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules</b></li> <li>● <b>10GE-DWDM SFP+ optical modules</b></li> <li>● <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables</b></li> <li>● <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

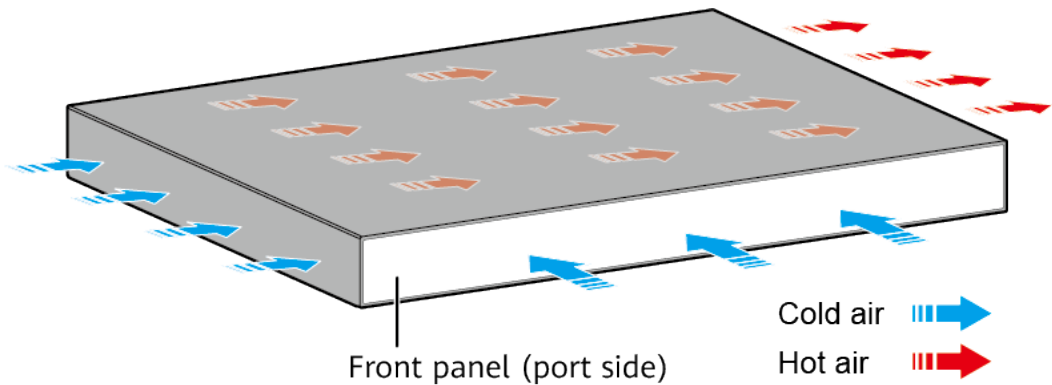
The S5731-S32ST4X-D has the same types of indicators as the S5731-S32ST4X-A. For details, see the S5731-S32ST4X-A.

## Power Supply System

The switch has a built-in DC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1279** Technical specifications of the S5731-S32ST4X-D

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.40 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 236.0 mm (1.72 in. x 17.40 in. x 9.29 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90 mm x 550 mm x 355 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.98 kg (6.57 lb)
Weight with packaging [kg(lb)]	4.34 kg (9.57 lb)
Typical power consumption [W]	69.46 W
Typical heat dissipation [BTU/hour]	237.00 BTU/hour
Maximum power consumption [W]	93.39 W
Maximum heat dissipation [BTU/hour]	318.66 BTU/hour
Static power consumption [W]	41.42 W
MTBF [years]	32.56 years
MTTR [hours]	2 hours



Item	Specification
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	41.42 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.74 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	DC built-in
Rated input voltage [V]	-48 V DC to -60 V DC
Input voltage range [V]	-38.4 V DC to -72 V DC
Maximum input current [A]	6 A
Memory	2 GB

Item	Specification
Flash memory	The physical space is 1 GB. You can run the display version command to view the actual available space.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 2$ kV in differential mode; $\pm 4$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.25.18 S5731-S32ST4X-D (98011810-001)

### Overview

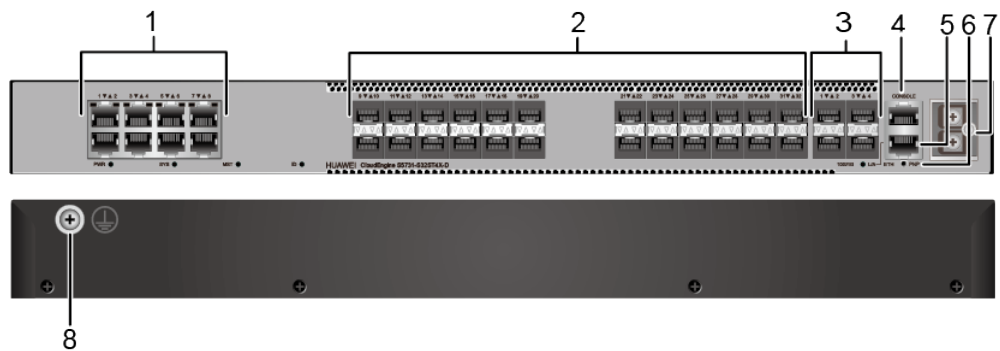
**Table 4-1280** Basic information about the S5731-S32ST4X-D

Item	Details
Description	S5731-S32ST4X-D(8*10/100/1000BASE-T ports, 24*GE SFP ports, 4*10GE SFP+ ports, DC power, front access)
Part Number	98011810-001

Item	Details
Model	S5731-S32ST4X-D
First supported version	V200R021C10SPC600

## Components

Figure 4-506 S5731-S32ST4X-D appearance



1	Eight 10/100/1000BASE-T ports	2	Twenty-four 100/1000BASE-X ports <b>NOTE</b> In V200R023C00 and later versions, 100/1000BASE-X ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.
3	Four 10GE SFP+ ports	4	One console port
5	One ETH management port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	DC power terminal <b>NOTE</b> It is used with <a href="#">DC Power Cable</a> .	8	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .

## Ports

**Table 4-1281** Ports on the S5731-S32ST4X-D

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>
100/1000BASE-X port	SFP	<p>A 100/1000BASE-X port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s.</p> <p>In V200R023C00 and later versions, 100/1000BASE-X ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"><li>• <b>FE SFP/eSFP optical modules</b></li><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</b></li></ul>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

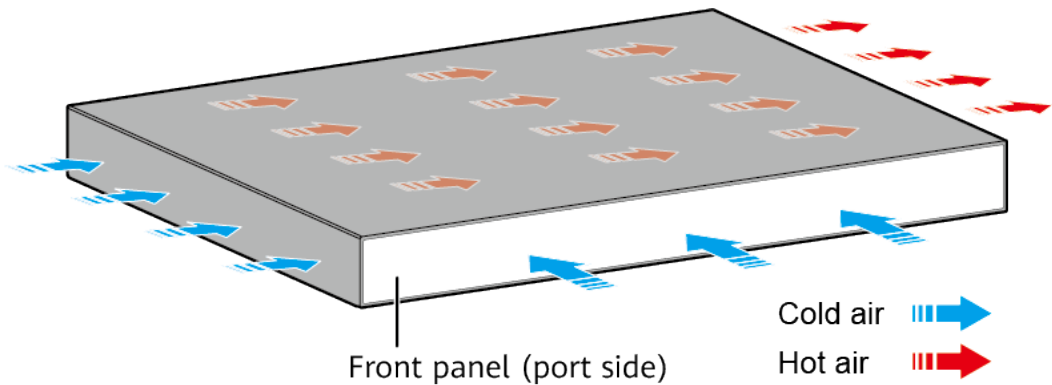
The S5731-S32ST4X-D has the same types of indicators as the S5731-S32ST4X-A. For details, see the S5731-S32ST4X-A.

## Power Supply System

The switch has a built-in DC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1282** Technical specifications of the S5731-S32ST4X-D

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.40 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 236.0 mm (1.72 in. x 17.40 in. x 9.29 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90 mm x 550 mm x 355 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.98 kg (6.57 lb)
Weight with packaging [kg(lb)]	4.34 kg (9.57 lb)
Typical power consumption [W]	69.46 W
Typical heat dissipation [BTU/hour]	237.00 BTU/hour
Maximum power consumption [W]	93.39 W
Maximum heat dissipation [BTU/hour]	318.66 BTU/hour
Static power consumption [W]	41.42 W
MTBF [years]	32.56 years
MTTR [hours]	2 hours



Item	Specification
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	41.42 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.74 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.44 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"><li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li><li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li><li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li></ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	–40°C to +70°C (–40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Storage altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Power supply mode	DC built-in
Rated input voltage [V]	–48 V DC to –60 V DC
Input voltage range [V]	–38.4 V DC to –72 V DC
Maximum input current [A]	6 A
Memory	2 GB

Item	Specification
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 2$ kV in differential mode, $\pm 4$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.25.19 S5731-S48S4X (98011805)

### Overview

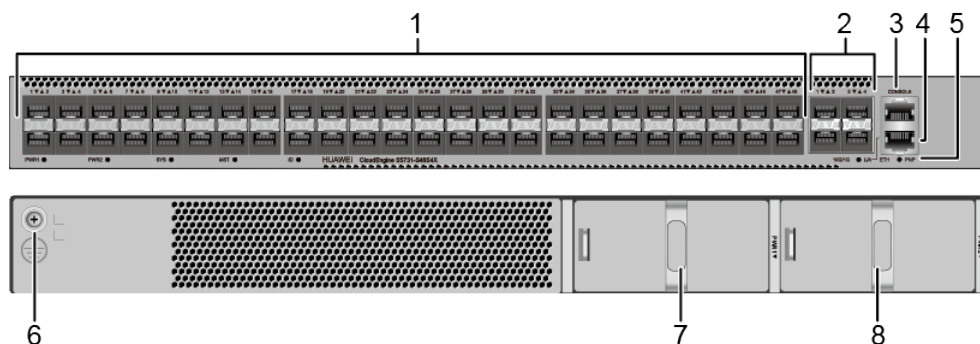
**Table 4-1283** Basic information about the S5731-S48S4X

Item	Details
Description	S5731-S48S4X(48*GE SFP ports, 4*10GE SFP+ ports, without power module)
Part Number	98011805
Model	S5731-S48S4X

Item	Details
First supported version	V200R021C01

## Components

Figure 4-507 S5731-S48S4X appearance



1	Forty-eight 100/1000BASE-X ports <b>NOTE</b> In V200R023C00 and later versions, ports numbered from GE5 to GE48 can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.	2	Four 10GE SFP+ ports
3	One console port	4	One ETH management port
5	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .

7	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>	8	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>
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## Ports

**Table 4-1284** Ports on the S5731-S48S4X

Port	Connector Type	Description	Available Components
100/1000BASE-X port	SFP	<p>A 100/1000BASE-X port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s.</p> <p>In V200R023C00 and later versions, ports numbered from GE5 to GE48 can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"> <li>• <a href="#">FE SFP/eSFP optical modules</a></li> <li>• <a href="#">GE eSFP optical modules</a></li> <li>• <a href="#">GE-CWDM eSFP optical modules</a></li> <li>• <a href="#">GE-DWDM eSFP optical modules</a></li> <li>• <a href="#">GE SFP copper module</a></li> <li>• <a href="#">2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</a></li> </ul>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

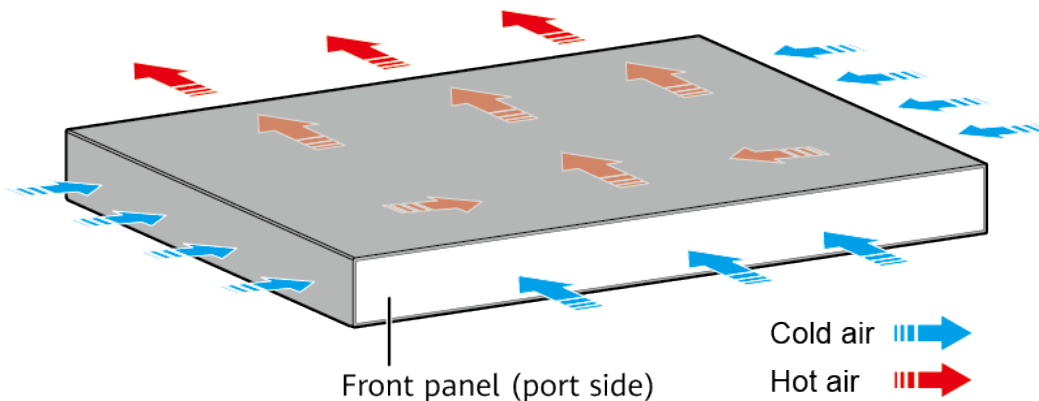
The S5731-S48S4X has the same types of indicators as the S5731-S32ST4X. For details, see the S5731-S32ST4X.

## Power Supply System

The switch can use a single power module or two power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation System

The switch has three built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1285** Technical specifications of the S5731-S48S4X

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.40 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.40 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	5.12 kg (11.29 lb)
Weight with packaging [kg(lb)]	7.65 kg (16.87 lb)
Typical power consumption [W]	93.69 W
Typical heat dissipation [BTU/hour]	319.68 BTU/hour
Maximum power consumption [W]	128.89 W (150 W AC or 180 W DC) 141.96 W (600 W AC)
Maximum heat dissipation [BTU/hour]	439.79 (150 W AC or 180 W DC) 484.38 (600 W AC)
Static power consumption [W]	50.44 W



Item	Specification
MTBF [years]	64.97 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	45.47 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.79 dB(A)
Number of card slots	0
Number of power slots	2
Number of fans modules	3
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: -48 V DC to -60 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC; 45 Hz to 65 Hz</li> <li>High-voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum input current [A]	The current specifications depend on the pluggable power modules in use. For details, see the related power module specifications.
Memory	2 GB
Flash memory	The physical space is 1 GB. You can run the display version command to view the actual available space.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	<ul style="list-style-type: none"> <li>Configured with AC power modules: <math>\pm 6</math> kV in differential mode and <math>\pm 6</math> kV in common mode</li> <li>Configured with DC power modules: <math>\pm 2</math> kV in differential mode and <math>\pm 4</math> kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left, front and right, air exhaustion from behind
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.25.20 S5731-S48S4X (98011805-001)

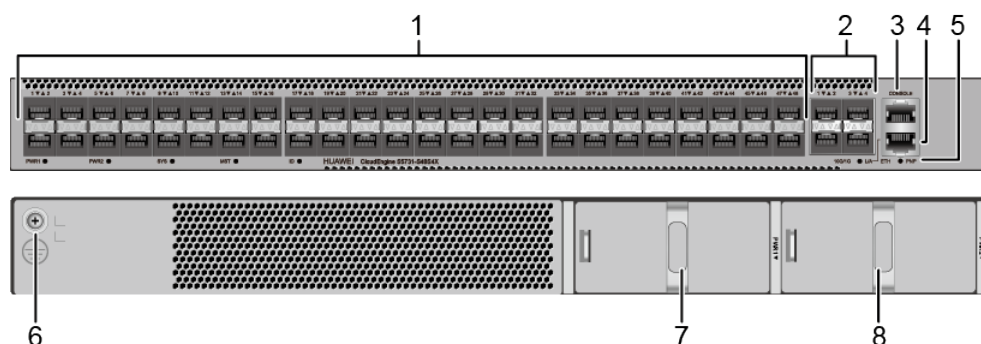
### Overview

Table 4-1286 Basic information about the S5731-S48S4X

Item	Details
Description	S5731-S48S4X(48*GE SFP ports, 4*10GE SFP+ ports, without power module)
Part Number	98011805-001
Model	S5731-S48S4X
First supported version	V200R021C10SPC600

### Components

Figure 4-508 S5731-S48S4X appearance



1	Forty-eight 100/1000BASE-X ports <b>NOTE</b> In V200R023C00 and later versions, ports numbered from GE5 to GE48 can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.	2	Four 10GE SFP+ ports
3	One console port	4	One ETH management port

5	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>
7	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>	8	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>

## Ports

**Table 4-1287** Ports on the S5731-S48S4X

Port	Connector Type	Description	Available Components
100/1000BASE-X port	SFP	<p>A 100/1000BASE-X port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s.</p> <p>In V200R023C00 and later versions, ports numbered from GE5 to GE48 can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"><li>• <b>FE SFP/eSFP optical modules</b></li><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</b></li></ul>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules</b></li> <li>● <b>10GE-DWDM SFP+ optical modules</b></li> <li>● <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables</b></li> <li>● <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

The S5731-S48S4X has the same types of indicators as the S5731-S32ST4X. For details, see the S5731-S32ST4X.

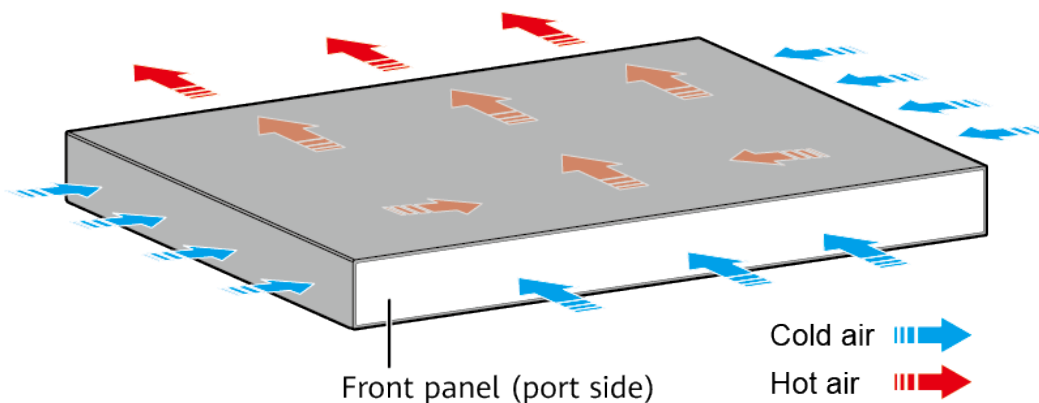
## Power Supply System

The switch can use a single power module or two power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation System

The switch has three built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.





**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1288** Technical specifications of the S5731-S48S4X

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	5.12 kg (11.29 lb)
Weight with packaging [kg(lb)]	7.65 kg (16.87 lb)
Typical power consumption [W]	93.69 W
Typical heat dissipation [BTU/hour]	319.68 BTU/hour
Maximum power consumption [W]	128.89 W (150 W AC or 180 W DC) 141.96 W (600 W AC)
Maximum heat dissipation [BTU/hour]	439.79 (150 W AC or 180 W DC) 484.38 (600 W AC)
Static power consumption [W]	50.44 W

Item	Specification
MTBF [years]	64.97 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	45.47 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.79 dB(A)
Number of card slots	0
Number of power slots	2
Number of fans modules	3
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.44 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	–40°C to +70°C (–40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Storage altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: –48 V DC to –60 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"><li>AC input: 90 V AC to 290 V AC; 45–65 Hz</li><li>High-voltage DC input: 190 V DC to 290 V DC</li><li>DC input: -38.4 V DC to -72 V DC</li></ul>
Maximum input current [A]	The current specifications are related to the pluggable power module. For details, see Pluggable Power Modules.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	<ul style="list-style-type: none"><li>Configured with AC power modules: <math>\pm 6</math> kV in differential mode and <math>\pm 6</math> kV in common mode</li><li>Configured with DC power modules: <math>\pm 2</math> kV in differential mode and <math>\pm 4</math> kV in common mode</li></ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from left, front, and right and air exhaust from rear
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.25.21 S5731-S48S4X-A (98011801)

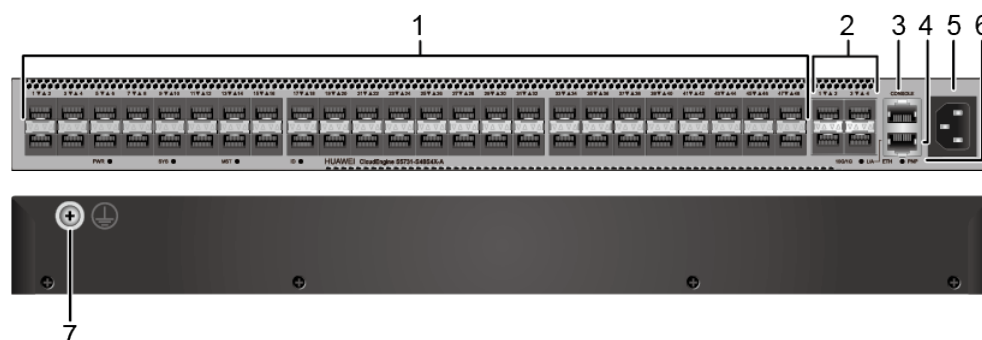
### Overview

Table 4-1289 Basic information about the S5731-S48S4X-A

Item	Details
Description	S5731-S48S4X-A(48*GE SFP ports, 4*10GE SFP+ ports, AC power, front access)
Part Number	98011801
Model	S5731-S48S4X-A
First supported version	V200R021C01

### Components

Figure 4-509 S5731-S48S4X-A appearance



1	Forty-eight 100/1000BASE-X ports <b>NOTE</b> In V200R023C00 and later versions, ports numbered from GE5 to GE48 can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.	2	Four 10GE SFP+ ports
3	One console port	4	One ETH management port

5	<p>AC socket</p> <p><b>NOTE</b> It is used with an <b>AC power cable</b>.</p>	6	<p>One PNP button</p> <p><b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	-	-

## Ports

**Table 4-1290** Ports on the S5731-S48S4X-A

Port	Connector Type	Description	Available Components
100/1000BASE-X port	SFP	<p>A 100/1000BASE-X port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s.</p> <p>In V200R023C00 and later versions, ports numbered from GE5 to GE48 can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"> <li>• <b>FE SFP/eSFP optical modules</b></li> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</b></li> </ul>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

The S5731-S48S4X-A has the same types of indicators as the S5731-S32ST4X-A. For details, see the S5731-S32ST4X-A.

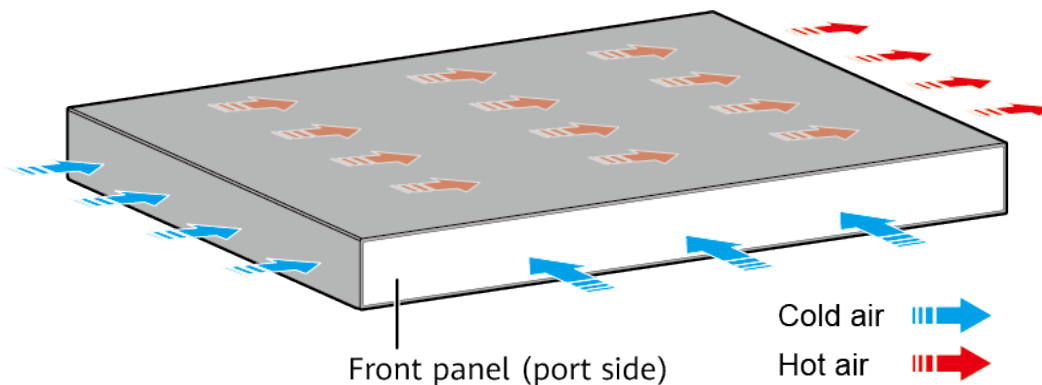
## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.





**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1291** Technical specifications of the S5731-S48S4X-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.40 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.40 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90 mm x 550 mm x 355 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.49 kg (7.69 lb)
Weight with packaging [kg(lb)]	4.85 kg (10.69 lb)
Typical power consumption [W]	87.89 W
Typical heat dissipation [BTU/hour]	299.89 BTU/hour
Maximum power consumption [W]	121.04 W
Maximum heat dissipation [BTU/hour]	413.00 BTU/hour
Static power consumption [W]	47.28 W
MTBF [years]	31.39 years
MTTR [hours]	2 hours

Item	Specification
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	41.42 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.74 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	- AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	- AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	3 A
Memory	2 GB

Item	Specification
Flash memory	The physical space is 1 GB. You can run the display version command to view the actual available space.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	±6 kV in differential mode; ±6 kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.25.22 S5731-S48S4X-A (98011801-001)

### Overview

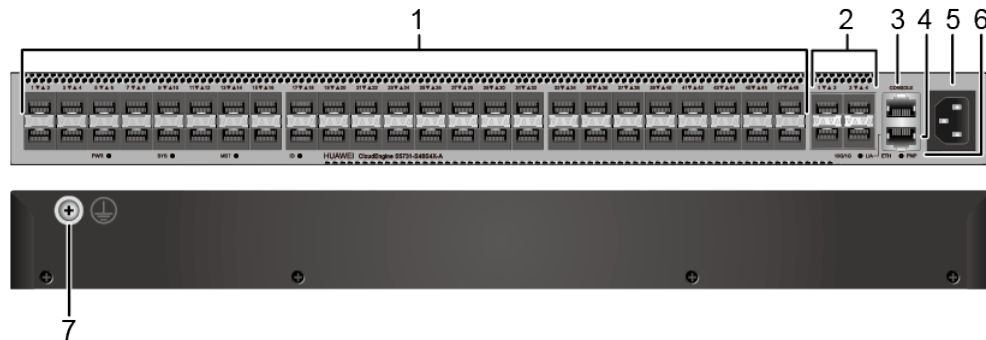
**Table 4-1292** Basic information about the S5731-S48S4X-A

Item	Details
Description	S5731-S48S4X-A(48*GE SFP ports, 4*10GE SFP+ ports, AC power, front access)
Part Number	98011801-001
Model	S5731-S48S4X-A

Item	Details
First supported version	V200R021C10SPC600

## Components

Figure 4-510 S5731-S48S4X-A appearance



1	Forty-eight 100/1000BASE-X ports <b>NOTE</b> In V200R023C00 and later versions, ports numbered from GE5 to GE48 can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.	2	Four 10GE SFP+ ports
3	One console port	4	One ETH management port
5	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	-	-

## Ports

**Table 4-1293** Ports on the S5731-S48S4X-A

Port	Connector Type	Description	Available Components
100/1000BASE-X port	SFP	<p>A 100/1000BASE-X port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s.</p> <p>In V200R023C00 and later versions, ports numbered from GE5 to GE48 can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"><li>• <b>FE SFP/eSFP optical modules</b></li><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</b></li></ul>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules</b></li> <li>● <b>10GE-DWDM SFP+ optical modules</b></li> <li>● <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables</b></li> <li>● <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

The S5731-S48S4X-A has the same types of indicators as the S5731-S32ST4X-A. For details, see the S5731-S32ST4X-A.

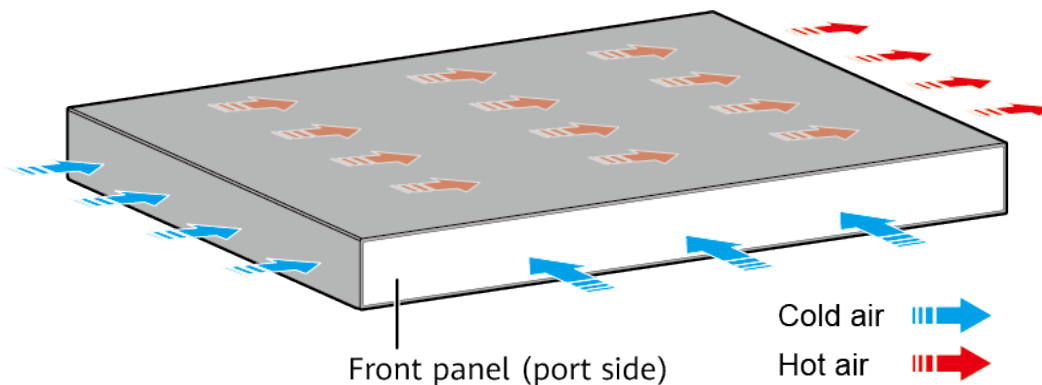
## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.





**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1294** Technical specifications of the S5731-S48S4X-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90 mm x 550 mm x 355 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.49 kg (7.69 lb)
Weight with packaging [kg(lb)]	4.85 kg (10.69 lb)
Typical power consumption [W]	87.89 W
Typical heat dissipation [BTU/hour]	299.89 BTU/hour
Maximum power consumption [W]	121.04 W
Maximum heat dissipation [BTU/hour]	413.00 BTU/hour
Static power consumption [W]	47.28 W
MTBF [years]	31.39 years
MTTR [hours]	2 hours
Availability	> 0.99999

Item	Specification
Noise at normal temperature (acoustic power) [dB(A)]	41.42 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.74 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.44 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>

Item	Specification
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	- AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	- AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	3 A
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	Differential mode: ±6 kV; common mode: ±6 kV
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.25.23 S5731-S24N4X2Q-A

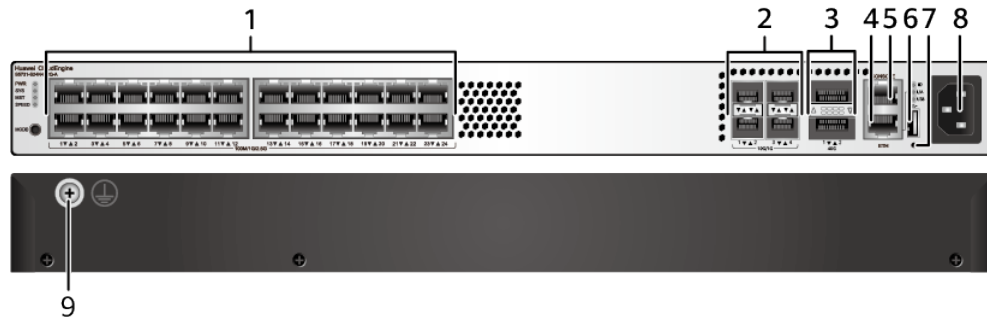
### Overview

**Table 4-1295** Basic information about the S5731-S24N4X2Q-A

Item	Details
Description	S5731-S24N4X2Q-A(24*100M/1G/2.5G Ethernet ports, 4*10GE SFP+ ports, 2*40GE QSFP ports, AC power, front access)
Part Number	02354VBY
Model	S5731-S24N4X2Q-A
First supported version	V200R022C00

### Components

**Figure 4-511** S5731-S24N4X2Q-A appearance



1	Twenty-four 100M/1000M/2.5GE BASE-T ports (multi-GE ports)	2	Four 10GE SFP+ ports
3	Two 40GE QSFP+ ports	4	One ETH management port
5	One console port	6	One USB port

7	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	8	<p>AC socket</p> <p><b>NOTE</b></p> <p>It is used with an <a href="#">AC power cable</a>.</p>
9	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <a href="#">ground cable</a>.</p>	-	-

## Ports

**Table 4-1296** Maximum transmission distances of different cables on multi-GE ports

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)	
	100M/1000M	2.5GE
Category 5e unshielded twisted pair (Cat5e UTP)	100 m	100 m
Category 5e shielded twisted pair (Cat5e STP)	100 m	100 m
Category 6 unshielded twisted pair (Cat6 UTP)	100 m	100 m
Category 6 shielded twisted pair (Cat6 STP)	100 m	100 m
Category 6A unshielded twisted pair (Cat6A U/UTP)	100 m	100 m
Category 6A foiled/unshielded twisted pair (Cat6A F/UTP)	100 m	100 m
Category 6A shielded twisted pair (Cat6A STP)	100 m	100 m
Category 7 twisted pair (Cat7)	100 m	100 m

 **NOTE**

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

**Table 4-1297** Ports on the S5731-S24N4X2Q-A

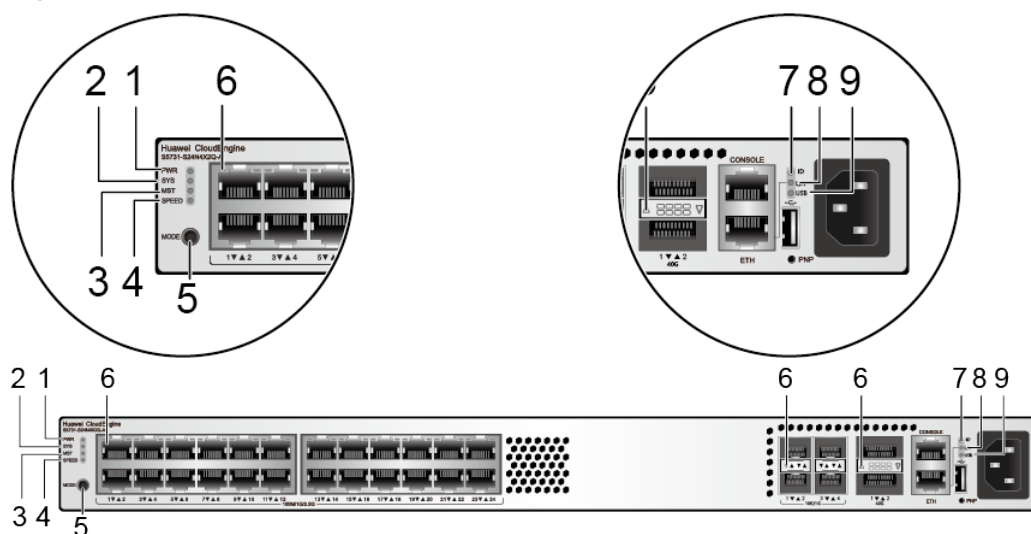
Port	Connector Type	Description	Available Components
100M/1000M/ 2.5GE BASE-T port (multi-GE port)	RJ45	A 100M/1000M/ 2.5GE BASE-T port (multi-GE port) sends and receives service data at 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s.	If the 2.5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category.
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>

Port	Connector Type	Description	Available Components
40GE SFP+ optical port	QSFP+	<p>A 40GE QSFP+ optical port sends and receives service traffic at 40 Gbit/s.</p> <p>A 40GE QSFP+ optical port can be split into four 10GE ports.</p>	<ul style="list-style-type: none"> <li>● <b>40GE QSFP+ optical modules</b></li> <li>● <b>1 m, 3 m, and 5 m QSFP+ high-speed copper cables</b></li> <li>● <b>10 m QSFP+ AOC cable</b></li> <li>● <b>2 m QSFP28 dedicated stack cable</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<b>Ethernet cable</b>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

Figure 4-512 Indicators on the S5731-S24N4X2Q-A





**Table 4-1298** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.

No.	Indicator	Name	Color	Status	Description
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.

No.	Indicator	Name	Color	Status	Description
5	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a third time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED indicator is off.</p> <p><b>NOTE</b> Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> <li>If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows: <ul style="list-style-type: none"> <li>If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.</li> <li>If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.</li> </ul> </li> <li>If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.</li> </ul>

No.	Indicator	Name	Color	Status	Description
6	-	Multi-GE port indicator (one indicator for each port)			Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1299</a> and <a href="#">Table 4-1300</a> .
		40GE optical port indicator (one indicator for each port)			

No.	Indicator	Name	Color	Status	Description
		10GE optical service port indicator (two indicators for each port)	Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		
7	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
8	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.

No.	Indicator	Name	Color	Status	Description
9	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1299** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	100M/1000M/2.5GE port: The port is operating at 100 Mbit/s or 1000 Mbit/s.
	Green	Blinking	100M/1000M/2.5GE port: The port is operating at 2.5 Gbit/s. 40GE port: The port is operating at 40 Gbit/s.

**Table 4-1300** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.

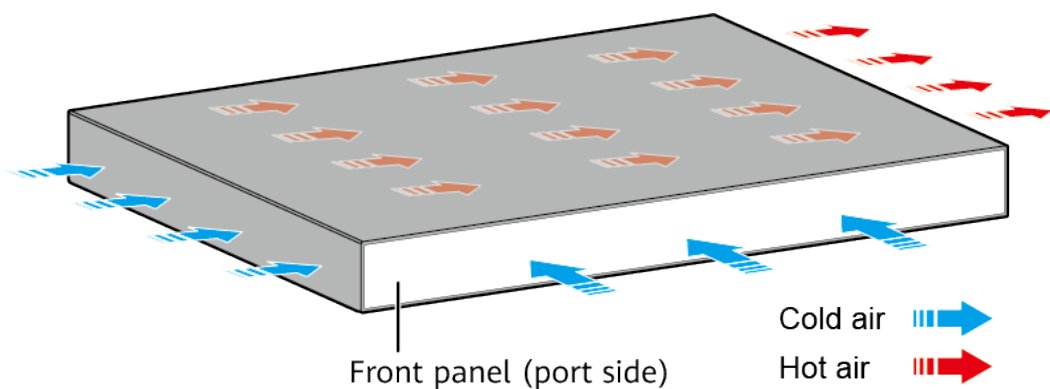
Display Mode	Color	Status	Description
	Green	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1301** Technical specifications of the S5731-S24N4X2Q-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 236.0 mm (1.72 in. x 17.4 in. x 9.29 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90 mm x 547 mm x 357 mm (3.54 in. x 21.54 in. x 14.06 in.)



Item	Specification
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	4.76 kg (10.49 lb)
Weight with packaging [kg(lb)]	5.4 kg(lb)
Typical power consumption [W]	106 W
Typical heat dissipation [BTU/hour]	361.69 BTU/hour
Maximum power consumption [W]	134 W
Maximum heat dissipation [BTU/hour]	457.23 BTU/hour
Static power consumption [W]	70 W
MTBF [years]	40.40 years
MTTR [hours]	2.97 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	43.70 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.70 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.44 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"><li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li><li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li><li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li></ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	–40°C to +70°C (–40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Storage altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100–240 V AC; 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	3 A
Memory	2 GB

Item	Specification
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	Differential mode: $\pm 6$ kV; common mode: $\pm 6$ kV
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.25.24 S5731-S24UN4X2Q

### Overview

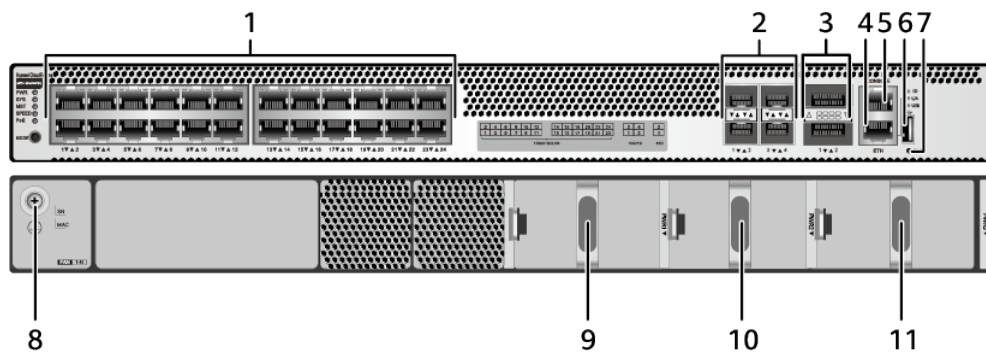
**Table 4-1302** Basic information about the S5731-S24UN4X2Q

Item	Details
Description	S5731-S24UN4X2Q (24*100M/1G/2.5G Ethernet ports, 4*10GE SFP+ ports, 2*40GE QSFP ports, PoE++, without power module)
Part Number	02354VCC

Item	Details
Model	S5731-S24UN4X2Q
First supported version	V200R022C00

## Components

Figure 4-513 S5731-S24UN4X2Q appearance



1	Twenty-four 100M/1000M/2.5GE BASE-T PoE++ ports (multi-GE ports)	2	Four 10GE SFP+ ports
3	Two 40GE QSFP+ ports	4	One ETH management port
5	One console port	6	One USB port
7	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	8	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .
9	Power module slot 1 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">PAC600S56-EB</a></li> <li>• <a href="#">PAC1000S56-EB</a></li> <li>• <a href="#">PDC1000S56-EB</a></li> </ul>	10	Power module slot 2 <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">PAC600S56-EB</a></li> <li>• <a href="#">PAC1000S56-EB</a></li> <li>• <a href="#">PDC1000S56-EB</a></li> </ul>

1	Power module slot 3	-	-
1	<b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">PAC600S56-EB</a></li> <li>• <a href="#">PAC1000S56-EB</a></li> <li>• <a href="#">PDC1000S56-EB</a></li> </ul>		

## Ports

**Table 4-1303** Maximum transmission distances of different cables on multi-GE ports

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)	
	100M/1000M	2.5GE
Category 5e unshielded twisted pair (Cat5e UTP)	100 m	100 m
Category 5e shielded twisted pair (Cat5e STP)	100 m	100 m
Category 6 unshielded twisted pair (Cat6 UTP)	100 m	100 m
Category 6 shielded twisted pair (Cat6 STP)	100 m	100 m
Category 6A unshielded twisted pair (Cat6A U/UTP)	100 m	100 m
Category 6A foiled/unshielded twisted pair (Cat6A F/UTP)	100 m	100 m
Category 6A shielded twisted pair (Cat6A STP)	100 m	100 m
Category 7 twisted pair (Cat7)	100 m	100 m

### NOTE

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

**Table 4-1304** Ports on the S5731-S24UN4X2Q

Port	Connector Type	Description	Available Components
100M/1000M/ 2.5GE BASE-T PoE ++ port (multi-GE port)	RJ45	A 100M/1000M/ 2.5GE BASE-T port (multi-GE port) sends and receives service data at 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s.  The port supports the PoE function.	If the 2.5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category.

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules</b></li> <li>● <b>10GE-DWDM SFP+ optical modules</b></li> <li>● <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables</b></li> <li>● <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>

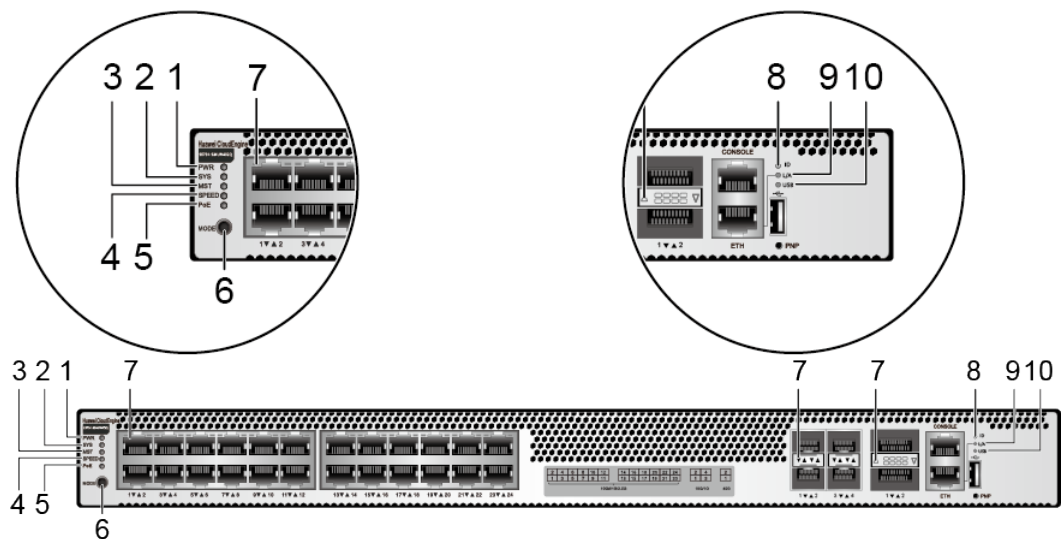
Port	Connector Type	Description	Available Components
40GE SFP+ optical port	QSFP+	<p>A 40GE QSFP+ optical port sends and receives service traffic at 40 Gbit/s.</p> <p>A 40GE QSFP+ optical port can be split into four 10GE ports.</p>	<ul style="list-style-type: none"> <li>● <b>40GE QSFP+ optical modules</b></li> <li>● <b>1 m, 3 m, and 5 m QSFP+ high-speed copper cables</b></li> <li>● <b>10 m QSFP+ AOC cable</b></li> <li>● <b>2 m QSFP28 dedicated stack cable</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<b>Ethernet cable</b>



Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

Figure 4-514 Indicators on the S5731-S24N4X2Q



**Table 4-1305** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.

No.	Indicator	Name	Color	Status	Description
			Green	Blinking	<ul style="list-style-type: none"><li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li><li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li></ul>
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
5	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.

No.	Indicator	Name	Color	Status	Description
6	MODE	Mode switch button	-	-	<ul style="list-style-type: none"><li>• When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li><li>• When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li><li>• When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li><li>• When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li></ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p> <p><b>NOTE</b></p> <p>Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"><li>• If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:<ul style="list-style-type: none"><li>• If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.</li><li>• If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.</li></ul></li><li>• If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.</li></ul>

No.	Indicator	Name	Color	Status	Description
7	-	Multi-GE port indicator (one indicator for each port)			Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1306</a> and <a href="#">Table 4-1307</a> .
		40GE optical port indicator (one indicator for each port)			

No.	Indicator	Name	Color	Status	Description
		10GE optical service port indicator (two indicators for each port)	Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green).  Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		
8	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
9	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.

No.	Indicator	Name	Color	Status	Description
10	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1306** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	100M/1000M/2.5GE port: The port is operating at 100 Mbit/s or 1000 Mbit/s. 100M/1000M/2.5GE/5GE/10GE BASE-T port: The port is operating at 100 Mbit/s or 1000 Mbit/s.
	Green	Blinking	100M/1000M/2.5GE port: The port is operating at 2.5 Gbit/s. 100M/1000M/2.5GE/5GE/10GE BASE-T port: The port is operating at 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s. 40GE port: The port is operating at 40 Gbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.



**Table 4-1307** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s.

## Power Supply System

The switch is a PoE switch and supports three power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1308** Power supply configurations

Power Module 1	Power Module 2	Power Module 3	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V)	-	-	778 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 12</li> <li>● 802.3bt (90 W per port): 8</li> </ul>
1000 W AC (110 V)	-	-	688 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 22</li> <li>● 802.3bt (60 W per port): 11</li> <li>● 802.3bt (90 W per port): 7</li> </ul>

Power Module 1	Power Module 2	Power Module 3	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W DC	-	-	778 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 12</li> <li>802.3bt (90 W per port): 8</li> </ul>
600 W AC (220 V)	-	-	441 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 14</li> <li>802.3bt (60 W per port): 7</li> <li>802.3bt (90 W per port): 4</li> </ul>
600 W AC (110 V)	-	-	156 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 10</li> <li>802.3at (30 W per port): 5</li> <li>802.3bt (60 W per port): 2</li> <li>802.3bt (90 W per port): 1</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	-	1678 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 24</li> <li>802.3bt (90 W per port): 18</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	-	1498 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 24</li> <li>802.3bt (90 W per port): 16</li> </ul>

Power Module 1	Power Module 2	Power Module 3	Available PoE Power	Maximum Number of Ports (Fully Loaded)
600 W AC (220 V)	600 W AC (220 V)	–	998 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 16</li> <li>• 802.3bt (90 W per port): 11</li> </ul>
600 W AC (110 V)	600 W AC (110 V)	–	441 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 14</li> <li>• 802.3bt (60 W per port): 7</li> <li>• 802.3bt (90 W per port): 4</li> </ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	–	1318 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 21</li> <li>• 802.3bt (90 W per port): 14</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	2268 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 24</li> <li>• 802.3bt (90 W per port): 24</li> </ul>
600 W AC (220 V)	600 W AC (220 V)	600 W AC (220 V)	1581 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 24</li> <li>• 802.3bt (90 W per port): 17</li> </ul>

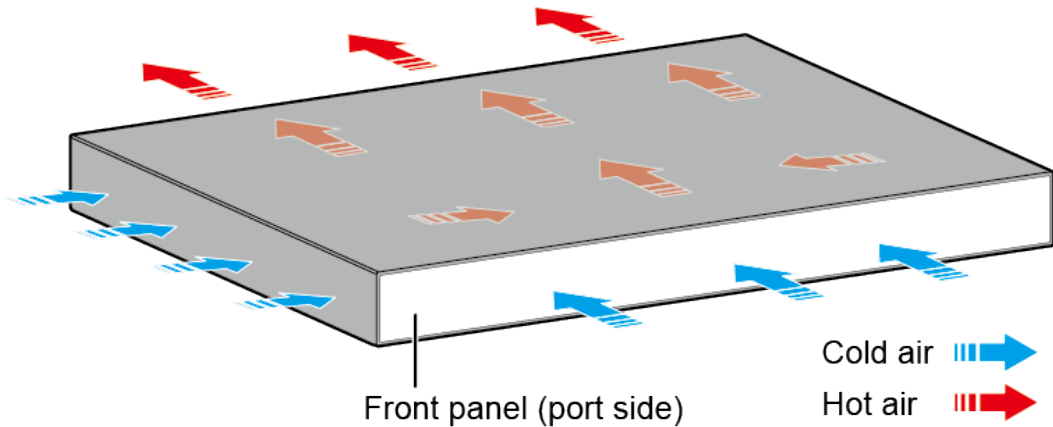
Power Module 1	Power Module 2	Power Module 3	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	2218 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 24</li> <li>802.3bt (90 W per port): 24</li> </ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	600 W AC (220 V)	1858 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 24</li> <li>802.3bt (90 W per port): 20</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	2268 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 24</li> <li>802.3bt (90 W per port): 24</li> </ul>
600 W AC (110 V)	600 W AC (110 V)	600 W AC (110 V)	726 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 12</li> <li>802.3bt (90 W per port): 8</li> </ul>

 **NOTE**

When a switch has multiple power modules installed, the multiple power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1309** Technical specifications of the S5731-S24UN4X2Q

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.40 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 454.0 mm (1.72 in. x 17.4 in. x 17.87 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	6.83 kg (15.06 lb)
Weight with packaging [kg(lb)]	9.81 kg (21.63 lb)
Typical power consumption [W]	126 W
Typical heat dissipation [BTU/hour]	429.93 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 171 W</li> <li>Full PoE load: 2571 W (PoE: 2268 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 583.48</li> <li>Full PoE load: 8772.60</li> </ul>

Item	Specification
Static power consumption [W]	81 W
MTBF [years]	54.08 years
MTTR [hours]	2.22 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Three 600 W AC PoE power modules with 30% load: 50.50 dBA Three 1000 W AC PoE power modules with 30% load: 52.50 dBA Three 1000 W DC PoE power modules with 30% load: 52.50 dBA
Noise at normal temperature (acoustic pressure) [dB(A)]	Three 600 W AC PoE power modules with 30% load: 36.82 dBA Three 1000 W AC PoE power modules with 30% load: 38.82 dBA Three 1000 W DC PoE power modules with 30% load: 38.82 dBA
Number of card slots	0
Number of power slots	3
Number of fans modules	2
Redundant power supply	1+1+1 Pluggable AC and DC power modules can be used together in the same switch.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.44 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"><li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li><li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li><li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li></ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	–40°C to +70°C (–40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Storage altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"><li>• AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC; 50/60 Hz</li><li>• High-voltage DC input: 240 V DC</li><li>• DC input: –48 V DC to –60 V DC</li></ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 290 V AC; 45 Hz to 66 Hz</li> <li>● High-voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum input current [A]	The current specifications are related to the pluggable power module. For details, see Pluggable Power Modules.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	<ul style="list-style-type: none"> <li>● Configured with AC power modules: <math>\pm 6</math> kV in differential mode and <math>\pm 6</math> kV in common mode</li> <li>● Configured with DC power modules: <math>\pm 2</math> kV in differential mode and <math>\pm 4</math> kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from the front and left and air exhaust from the rear
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification



## 4.25.25 S5731-S8UM16UN2Q

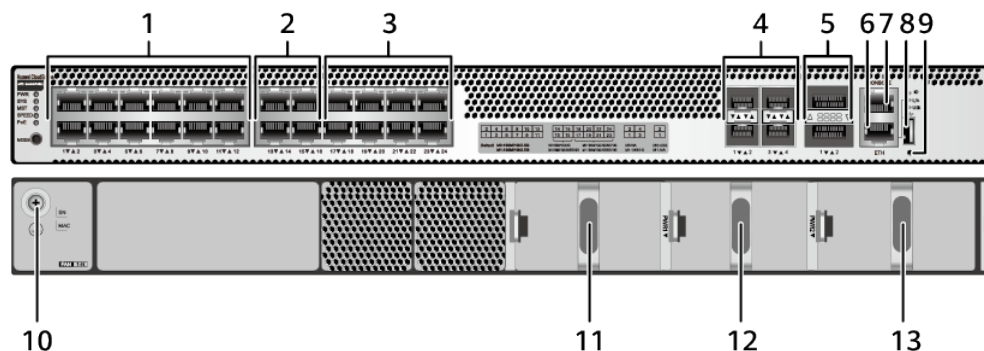
### Overview

**Table 4-1310** Basic information about the S5731-S8UM16UN2Q

Item	Details
Description	S5731-S8UM16UN2Q (8*100M/1/2.5/5/10G,16*100M/1/2.5G ports, 2*40GE QSFP ports or 12*100M/1/2.5/5/10G,12*100M/1/2.5G ports, 4*10GE SFP+ ports, PoE++, without power module)
Part Number	02354VCD
Model	S5731-S8UM16UN2Q
First supported version	V200R022C00

### Components

**Figure 4-515** S5731-S8UM16UN2Q appearance



1	Twelve 100M/1000M/2.5GE BASE-T PoE++ ports (multi-GE ports)	2	<p>Four 100M/1000M/2.5GE BASE-T PoE++ ports or four 100M/1000M/2.5GE/5GE/10GE BASE-T PoE++ ports (multi-GE ports)</p> <p><b>NOTE</b></p> <p>You can run the <b>set device port-config-mode enable</b> command to change the working mode of multi-GE, SFP+ and QSFP+ ports. By default, the working mode is "<b>8*10G+16*2.5G+2*40G</b>" and can be set to "<b>12*10G+12*2.5G+4*10G</b>".</p> <ul style="list-style-type: none"> <li>• In <b>8*10G+16*2.5G+2*40G</b> mode, the maximum rate of multi-GE ports numbered from 1 to 16 is 2.5 Gbit/s, and the maximum rate of multi-GE ports numbered from 17 to 24 is 10 Gbit/s. The 10GE SFP+ optical ports cannot be used, and the 40GE QSFP+ optical ports can be used.</li> <li>• In <b>12*10G+12*2.5G+4*10G</b> mode, the maximum rate of multi-GE ports numbered from 1 to 12 is 2.5 Gbit/s, and the maximum rate of multi-GE ports numbered from 13 to 24 is 10 Gbit/s. The 10GE SFP+ optical ports can be used, but the 40GE QSFP+ optical ports cannot be used.</li> </ul>
3	Eight 100M/1000M/2.5GE/5GE/10GE BASE-T PoE++ ports (multi-GE ports)	4	<p>Four 10GE SFP+ ports</p> <p><b>NOTE</b></p> <p>You can run the <b>set device port-config-mode enable</b> command to change the working mode of multi-GE, SFP+ and QSFP+ ports. By default, the working mode is "<b>8*10G+16*2.5G+2*40G</b>" and can be set to "<b>12*10G+12*2.5G+4*10G</b>".</p> <ul style="list-style-type: none"> <li>• In <b>8*10G+16*2.5G+2*40G</b> mode, the maximum rate of multi-GE ports numbered from 1 to 16 is 2.5 Gbit/s, and the maximum rate of multi-GE ports numbered from 17 to 24 is 10 Gbit/s. The 10GE SFP+ optical ports cannot be used, and the 40GE QSFP+ optical ports can be used.</li> <li>• In <b>12*10G+12*2.5G+4*10G</b> mode, the maximum rate of multi-GE ports numbered from 1 to 12 is 2.5 Gbit/s, and the maximum rate of multi-GE ports numbered from 13 to 24 is 10 Gbit/s. The 10GE SFP+ optical ports can be used, but the 40GE QSFP+ optical ports cannot be used.</li> </ul>

5	<p>Two 40GE QSFP+ ports</p> <p><b>NOTE</b></p> <p>You can run the <b>set device port-config-mode enable</b> command to change the working mode of multi-GE, SFP+ and QSFP+ ports. By default, the working mode is "<b>8*10G+16*2.5G+2*40G</b>" and can be set to "<b>12*10G+12*2.5G+4*10G</b>".</p> <ul style="list-style-type: none"> <li>• In <b>8*10G+16*2.5G+2*40G</b> mode, the maximum rate of multi-GE ports numbered from 1 to 16 is 2.5 Gbit/s, and the maximum rate of multi-GE ports numbered from 17 to 24 is 10 Gbit/s. The 10GE SFP+ optical ports cannot be used, and the 40GE QSFP+ optical ports can be used.</li> <li>• In <b>12*10G+12*2.5G+4*10G</b> mode, the maximum rate of multi-GE ports numbered from 1 to 12 is 2.5 Gbit/s, and the maximum rate of multi-GE ports numbered from 13 to 24 is 10 Gbit/s. The 10GE SFP+ optical ports can be used, but the 40GE QSFP+ optical ports cannot be used.</li> </ul>	6	One ETH management port
7	One console port	8	One USB port
9	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	10	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>
11	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <b>PAC600S56-EB</b></li> <li>• <b>PAC1000S56-EB</b></li> <li>• <b>PDC1000S56-EB</b></li> </ul>	12	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <b>PAC600S56-EB</b></li> <li>• <b>PAC1000S56-EB</b></li> <li>• <b>PDC1000S56-EB</b></li> </ul>

1 3	Power module slot 3  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">PAC600S56-EB</a></li> <li>• <a href="#">PAC1000S56-EB</a></li> <li>• <a href="#">PDC1000S56-EB</a></li> </ul>	-	-
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## Ports

**Table 4-1311** Maximum transmission distances of different cables on multi-GE ports

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/1000M	2.5GE	5GE	10GE
Category 5e unshielded twisted pair (Cat5e UTP)	100 m	100 m	<ul style="list-style-type: none"> <li>• 55 m</li> <li>• 100 m (6-a-1 bundle only for the first 30 m)</li> </ul> Not recommended due to high risks	Not supported
Category 5e shielded twisted pair (Cat5e STP)	100 m	100 m	100 m	Not supported
Category 6 unshielded twisted pair (Cat6 UTP)	100 m	100 m	100 m Not recommended due to high risks	Not supported
Category 6 shielded twisted pair (Cat6 STP)	100 m	100 m	100 m	Not supported
Category 6A unshielded twisted pair (Cat6A U/UTP)	100 m	100 m	100 m Not recommended due to high risks	Not supported

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/1000M	2.5GE	5GE	10GE
Category 6A foiled/unshielded twisted pair (Cat6A F/UTP)	100 m	100 m	100 m	100 m
Category 6A shielded twisted pair (Cat6A STP)	100 m	100 m	100 m	100 m
Category 7 twisted pair (Cat7)	100 m	100 m	100 m	100 m

 **NOTE**

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

If a port works at a rate of 5 Gbit/s, you are advised not to use unshielded Ethernet cables due to the following causes:

- 802.3bz requires that the ALSNR value for alien crosstalk between Ethernet cables be greater than 0, but the standards for Cat5e and Cat6 unshielded twisted pairs do not specify the required ALSNR value. Therefore, such cables may not meet the crosstalk requirement in 802.3bz, causing severe problems such as continuous packet loss or port flapping may occur.
- According the cabling specification TIA TSB-5021, using Cat5e and Cat6 cables for 5G poses high risks.
- Currently, no clear onsite testing or evaluation method is available for checking whether ALSNR of cables conforms to 802.3bz.

If a port works at a rate of 5 Gbit/s and a Cat6 shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL Class E (+All) or TIA Cat 6 Channel (+All). If a Cat6A shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL2 Class Ea (+All) or TIA Cat6A Channel (+All). Otherwise, serious problems such as continuous packet loss or interface flapping may occur.

If a port works at a rate of 10 Gbit/s and a Cat6A shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL2 Class Ea (+All) or TIA Cat6A Channel (+All). Otherwise, serious problems such as continuous packet loss or interface flapping may occur.

If Cat5e and Cat6 unshielded twisted pairs do not meet the 5G requirement, you are advised to replace them with shielded twisted pairs or reduce the rate of ports to 2.5G.

If Cat5E, Cat6, or Cat6A unshielded twisted pairs are used on electrical ports working at 10 Gbit/s, severe problems such as continuous packet loss or port flapping may occur.

**Table 4-1312** Ports on the S5731-S8UM16UN2Q

Port	Connector Type	Description	Available Components
100M/1000M/ 2.5GE BASE-T PoE ++ port (multi-GE port)	RJ45	A 100M/1000M/ 2.5GE BASE-T port (multi-GE port) sends and receives service data at 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s.  The port supports the PoE function.	If the 2.5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category.
100M/1000M/ 2.5GE/5GE/10GE BASE-T PoE++ port (multi-GE port)	RJ45	A 100M/1000M/ 2.5GE/5GE/10GE BASE-T port (multi-GE port) sends and receives service data at 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s.  The port supports the PoE function.	If the 2.5 Gbit/s or 5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category. If the 10 Gbit/s speed is required, the port must use an Ethernet cable of Cat6A F/UTP or higher category.

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules</b></li> <li>● <b>10GE-DWDM SFP+ optical modules</b></li> <li>● <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables</b></li> <li>● <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>

Port	Connector Type	Description	Available Components
40GE SFP+ optical port	QSFP+	<p>A 40GE QSFP+ optical port sends and receives service traffic at 40 Gbit/s.</p> <p>A 40GE QSFP+ optical port can be split into four 10GE ports.</p>	<ul style="list-style-type: none"> <li>● <b>40GE QSFP+ optical modules</b></li> <li>● <b>1 m, 3 m, and 5 m QSFP+ high-speed copper cables</b></li> <li>● <b>10 m QSFP+ AOC cable</b></li> <li>● <b>2 m QSFP28 dedicated stack cable</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<b>Ethernet cable</b>



Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

The S5731-S8UM16UN2Q has the same types of indicators as the S5731-S24UN4X2Q. For details, see the S5731-S24UN4X2Q.

## Power Supply System

The switch is a PoE switch and supports three power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1313** Power supply configurations

Power Module 1	Power Module 2	Power Module 3	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V)	-	-	778 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 12</li> <li>● 802.3bt (90 W per port): 8</li> </ul>
1000 W AC (110 V)	-	-	688 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 22</li> <li>● 802.3bt (60 W per port): 11</li> <li>● 802.3bt (90 W per port): 7</li> </ul>
1000 W DC	-	-	778 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 12</li> <li>● 802.3bt (90 W per port): 8</li> </ul>
600 W AC (220 V)	-	-	441 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 14</li> <li>● 802.3bt (60 W per port): 7</li> <li>● 802.3bt (90 W per port): 4</li> </ul>
600 W AC (110 V)	-	-	156 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 10</li> <li>● 802.3at (30 W per port): 5</li> <li>● 802.3bt (60 W per port): 2</li> <li>● 802.3bt (90 W per port): 1</li> </ul>

Power Module 1	Power Module 2	Power Module 3	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	–	1678 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 24</li> <li>● 802.3bt (90 W per port): 18</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	–	1498 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 24</li> <li>● 802.3bt (90 W per port): 16</li> </ul>
600 W AC (220 V)	600 W AC (220 V)	–	998 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 16</li> <li>● 802.3bt (90 W per port): 11</li> </ul>
600 W AC (110 V)	600 W AC (110 V)	–	441 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 14</li> <li>● 802.3bt (60 W per port): 7</li> <li>● 802.3bt (90 W per port): 4</li> </ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	–	1318 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 21</li> <li>● 802.3bt (90 W per port): 14</li> </ul>

Power Module 1	Power Module 2	Power Module 3	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	2268 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 24</li> <li>● 802.3bt (90 W per port): 24</li> </ul>
600 W AC (220 V)	600 W AC (220 V)	600 W AC (220 V)	1581 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 24</li> <li>● 802.3bt (90 W per port): 17</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	2218 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 24</li> <li>● 802.3bt (90 W per port): 24</li> </ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	600 W AC (220 V)	1858 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 24</li> <li>● 802.3bt (90 W per port): 20</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	2268 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 24</li> <li>● 802.3bt (90 W per port): 24</li> </ul>

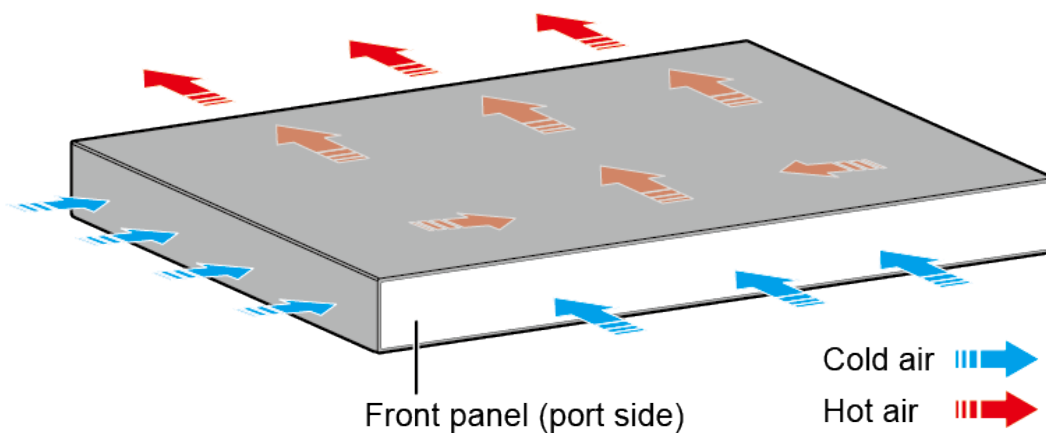
Power Module 1	Power Module 2	Power Module 3	Available PoE Power	Maximum Number of Ports (Fully Loaded)
600 W AC (110 V)	600 W AC (110 V)	600 W AC (110 V)	726 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 12</li> <li>• 802.3bt (90 W per port): 8</li> </ul>

**NOTE**

When a switch has multiple power modules installed, the multiple power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

### Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1314** Technical specifications of the S5731-S8UM16UN2Q

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.40 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 454.0 mm (1.72 in. x 17.4 in. x 17.87 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	6.83 kg (15.06 lb)
Weight with packaging [kg(lb)]	9.81 kg (21.63 lb)
Typical power consumption [W]	126 W
Typical heat dissipation [BTU/hour]	429.93 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 171 W</li> <li>Full PoE load: 2571 W (PoE: 2268 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 583.48</li> <li>Full PoE load: 8772.60</li> </ul>
Static power consumption [W]	81 W
MTBF [years]	54.08 years
MTTR [hours]	2.22 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Three 600 W AC PoE power modules with 30% load: 50.50 dBA Three 1000 W AC PoE power modules with 30% load: 52.50 dBA Three 1000 W DC PoE power modules with 30% load: 52.50 dBA

Item	Specification
Noise at normal temperature (acoustic pressure) [dB(A)]	Three 600 W AC PoE power modules with 30% load: 36.82 dBA Three 1000 W AC PoE power modules with 30% load: 38.82 dBA Three 1000 W DC PoE power modules with 30% load: 38.82 dBA
Number of card slots	0
Number of power slots	3
Number of fans modules	2
Redundant power supply	1+1+1 Pluggable AC and DC power modules can be used together in the same switch.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.44 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	–40°C to +70°C (–40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Storage altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: –48 V DC to –60 V DC</li> </ul>



Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 290 V AC; 45 Hz to 66 Hz</li> <li>● High-voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum input current [A]	The current specifications are related to the pluggable power module. For details, see Pluggable Power Modules.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	<ul style="list-style-type: none"> <li>● Configured with AC power modules: <math>\pm 6</math> kV in differential mode and <math>\pm 6</math> kV in common mode</li> <li>● Configured with DC power modules: <math>\pm 2</math> kV in differential mode and <math>\pm 4</math> kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from the front and left and air exhaust from the rear
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.26 S5731S-S

### 4.26.1 S5731S-S24T4X-A (02353AHV/02353AHV-001)

#### Version Mapping

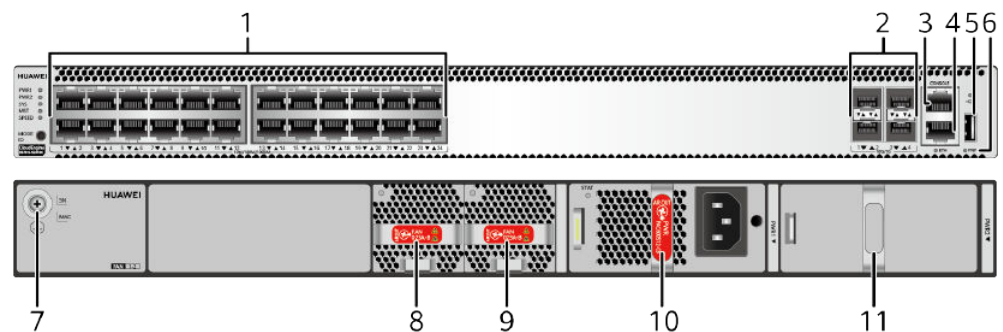
**Table 4-1315** lists the mapping between the S5731S-S24T4X-A chassis and software versions.

**Table 4-1315** Version mapping

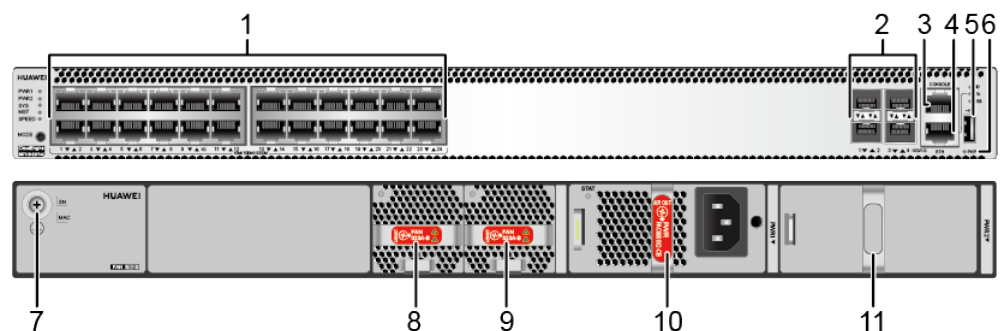
Series	Model	Software Version
S5731S-S	S5731S-S24T4X-A	02353AHV: V200R019C00 and later versions 02353AHV-001: V200R020C10 and later versions

#### Appearance and Structure

**Figure 4-516** S5731S-S24T4X-A (02353AHV) appearance



**Figure 4-517** S5731S-S24T4X-A (02353AHV-001) appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>	8	<p>Fan module slot 1</p> <p><b>NOTE</b></p> <p>Applicable fan module: <b>7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</b></p>

9	<p>Fan module slot 2</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	1 0	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>
1 1	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1316](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1316** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1317](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1317** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1318](#).

**Table 4-1318** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

## ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 4-1319** describes the attributes of an ETH management port.

**Table 4-1319** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

## USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

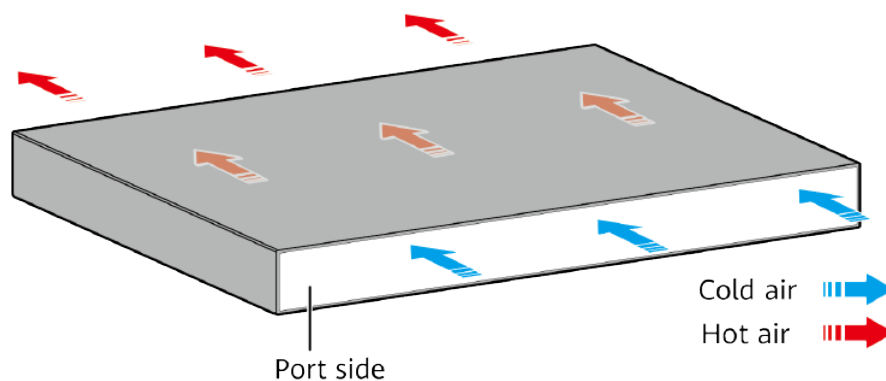
The S5731S-S24T4X-A has similar indicators to those on the S5731S-S48P4X-A except that the S5731S-S24T4X-A does not have a PoE mode indicator. For details, see **Indicator Description**.

## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation

The S5731S-S24T4X-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1320](#) lists technical specifications of the S5731S-S24T4X-A.

**Table 4-1320** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	57.73 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV

Item	Description
Power supply surge protection	<ul style="list-style-type: none"> <li>● Using AC power modules: ±6 kV in differential mode, ±6 kV in common mode</li> <li>● Using DC power modules: ±2 kV in differential mode, ±4 kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>● Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>● Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)</li> </ul>
Weight (with packaging)	9.35 kg (20.61 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>● AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>● High-Voltage DC input: 240 V DC</li> <li>● DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>● High-Voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	114 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	88 W



Item	Description
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02353AHV 02353AHV-001

## 4.26.2 S5731S-S24T4X-A (98011852)

### Overview

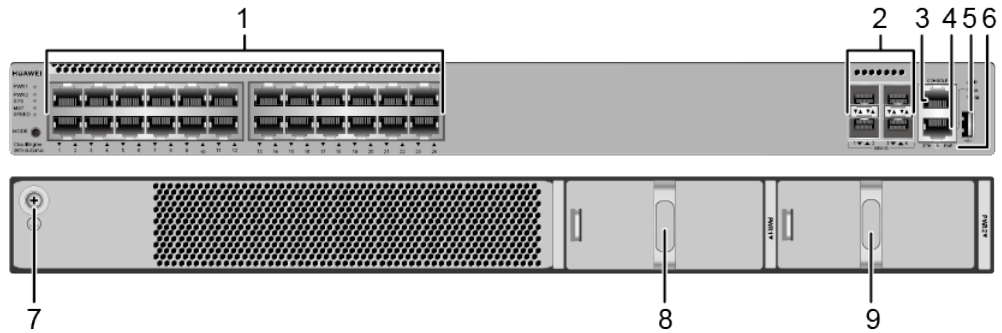
**Table 4-1321** Basic information about the S5731S-S24T4X-A

Item	Details
Description	S5731S-S24T4X Bundle (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, 1*AC power)
Part Number	98011852
Model	S5731S-S24T4X-A
First supported version	V200R021C10SPC600

Item	Details
Supported Patch Version	If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch.

## Components

Figure 4-518 S5731S-S24T4X-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ optical ports
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>
9	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>	-	-

## Ports

**Table 4-1322** Ports on the S5731S-S24T4X-A

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li><li>• <b>10GE-CWDM SFP+ optical modules</b></li><li>• <b>10GE-DWDM SFP+ optical modules</b></li><li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li><li>• <b>3 m and 10 m SFP+ AOC cables</b></li><li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li></ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

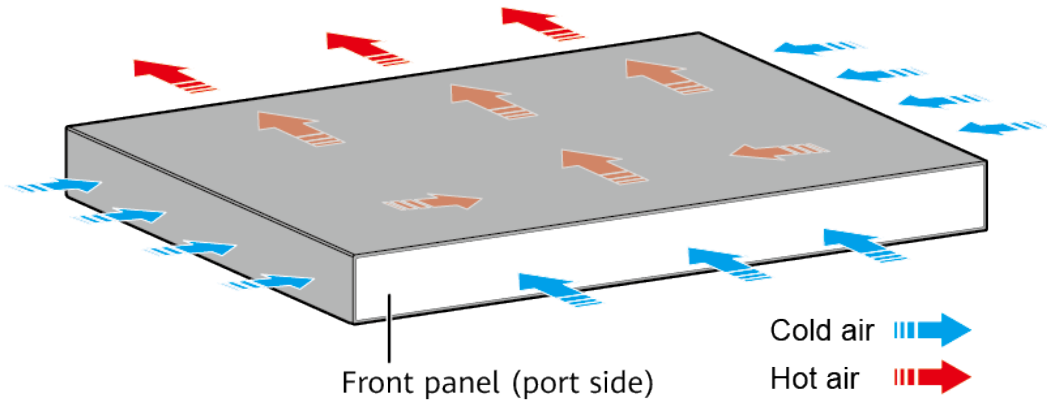
The S5731S-S24T4X-A has similar indicators to those on the S5731S-S48P4X-A except that the S5731S-S24T4X-A does not have a PoE mode indicator. For details, see the S5731S-S48P4X-A.

## Power Supply System

The switch can use a single power module or two power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1323** Technical specifications of the S5731S-S24T4X-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	5.60 kg (12.35 lb)
Weight with packaging [kg(lb)]	8.13 kg (17.92 lb)
Typical power consumption [W]	61 W
Typical heat dissipation [BTU/hour]	208.14 BTU/hour
Maximum power consumption [W]	87 W
Maximum heat dissipation [BTU/hour]	296.85 BTU/hour
Static power consumption [W]	44 W
MTBF [years]	86.81 years
MTTR [hours]	2 hours

Item	Specification
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	45.62 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.94 dB(A)
Number of card slots	0
Number of power slots	2
Number of fans modules	2
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). Devices cannot start when the temperature is lower than 0°C (32°F). The operating temperature of the switch is -5°C to +45°C (23°F to 113°F) when 10GE SFP+ optical modules with 40 km or longer transmission distances are used.
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: -48 V DC to -60 V DC</li> </ul>



Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 290 V AC; 45–65 Hz</li> <li>● High-voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum input current [A]	The current specifications are related to the pluggable power module. For details, see Pluggable Power Modules.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	<ul style="list-style-type: none"> <li>● Configured with AC power modules: <math>\pm 6</math> kV in differential mode and <math>\pm 6</math> kV in common mode</li> <li>● Configured with DC power modules: <math>\pm 2</math> kV in differential mode and <math>\pm 4</math> kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air flows in from the left, right, and front, and flows out from the rear.
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.26.3 S5731S-S24T4X-A1

### Overview

**Table 4-1324** Basic information about the S5731S-S24T4X-A1

Item	Details
Description	S5731S-S24T4X-A1 (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)
Part Number	98011859
Model	S5731S-S24T4X-A1
First supported version	V200R021C10SPC600
Supported Patch Version	If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch.

### Components

**Figure 4-519** S5731S-S24T4X-A1 appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One ETH management port

5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Ports

**Table 4-1325** Ports on the S5731S-S24T4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li><li>• <b>10GE-CWDM SFP+ optical modules</b></li><li>• <b>10GE-DWDM SFP+ optical modules</b></li><li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li><li>• <b>3 m and 10 m SFP+ AOC cables</b></li><li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li></ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

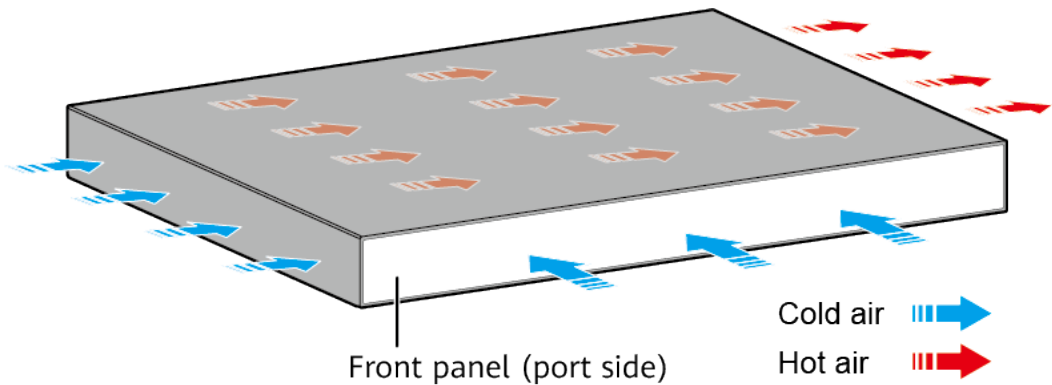
The S5731S-S24T4X-A1 has the same types of indicators as the S5731S-S48T4X-A1. For details, see the S5731S-S48T4X-A1.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1326** Technical specifications of the S5731S-S24T4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.)  Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 355.0 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.04 kg (6.7 lb)
Weight with packaging [kg(lb)]	4.40 kg (9.7 lb)
Typical power consumption [W]	63 W
Typical heat dissipation [BTU/hour]	214.96 BTU/hour
Maximum power consumption [W]	80 W
Maximum heat dissipation [BTU/hour]	272.97 BTU/hour
Static power consumption [W]	48 W
MTBF [years]	47.34 years
MTTR [hours]	2 hours
Availability	> 0.99999

Item	Specification
Noise at normal temperature (acoustic power) [dB(A)]	44.90 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.21 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F).</p> <p>The operating temperature of the switch is -5°C to +45°C (23°F to 113°F) when 10GE SFP+ optical modules with 40 km or longer transmission distances are used.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	3 A
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.



Item	Specification
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

#### 4.26.4 S5731S-S24P4X-A (02353AHY/ 02353AHY-001/02353AHY-003)

##### Version Mapping

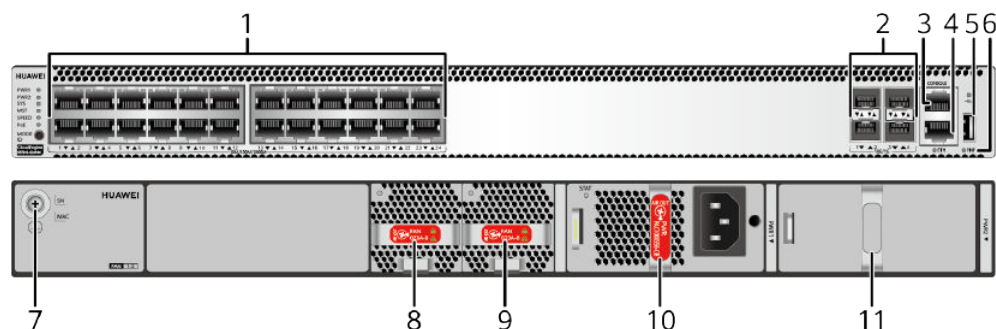
[Table 4-1327](#) lists the mapping between the S5731S-S24P4X-A chassis and software versions.

**Table 4-1327** Version mapping

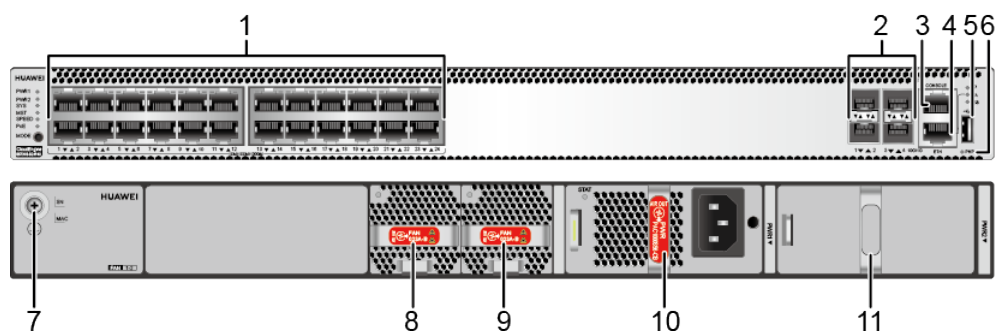
Series	Model	Software Version
S5731S-S	S5731S-S24P4X-A	02353AHY: V200R019C00 and later versions 02353AHY-001: V200R020C10 and later versions 02353AHY-003: V200R021C10SPC600 and later versions (If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch.)

## Appearance and Structure

**Figure 4-520** S5731S-S24P4X-A (02353AHY) appearance



**Figure 4-521** S5731S-S24P4X-A (02353AHY-001/02353AHY-003) appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	8	<p>Fan module slot 1</p> <p><b>NOTE</b> Applicable fan module: <b>7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</b></p>

9	<p>Fan module slot 2</p> <p><b>NOTE</b></p> <p>Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	1 0	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a> (applicable in V200R021C10 and later versions)</li> </ul>
1 1	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a> (applicable in V200R021C10 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1328](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1328** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1329](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1329** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1330](#).

**Table 4-1330** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1331](#) describes the attributes of an ETH management port.

**Table 4-1331** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5731S-S24P4X-A has the same types of indicators as the S5731S-S48P4X-A. For details, see [Indicator Description](#).

## Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1332** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	760 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>
1000 W AC (110 V)	–	665 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 22</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	Versions earlier than V200R021C10: 1330 W V200R021C10 and later versions: 1520 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>
600 W AC (220 V)	–	380 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
600 W AC (110 V)	–	95 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 6</li> <li>802.3at (30 W per port): 3</li> </ul>

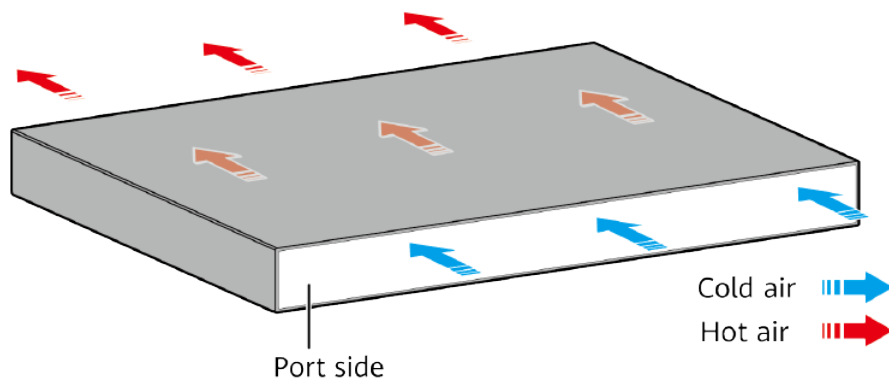
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
600 W AC (220 V)	600 W AC (220 V)	950 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>
600 W AC (110 V)	600 W AC (110 V)	380 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1330 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

## Heat Dissipation

The S5731S-S24P4X-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



## Technical Specifications

[Table 4-1333](#) lists technical specifications of the S5731S-S24P4X-A.

**Table 4-1333** Technical specifications

Item	Description
Memory (RAM)	2 GB



Item	Description
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	57.21 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)</li> </ul>
Weight (with packaging)	9.7 kg (21.38 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 121 W</li> <li>100% PoE loads: 977 W (PoE: 720 W)</li> </ul>

Item	Description
Typical power consumption (30% of traffic load, tested according to ATIS standard)	95 W
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 62.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02353AHY 02353AHY-001 02353AHY-003

## 4.26.5 S5731S-S48T4X-A (02353AJC/02353AJC-003)

### Version Mapping

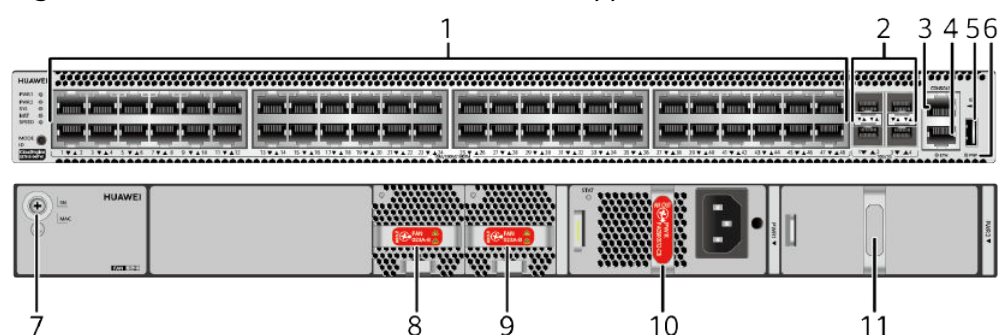
[Table 4-1334](#) lists the mapping between the S5731S-S48T4X-A chassis and software versions.

**Table 4-1334** Version mapping

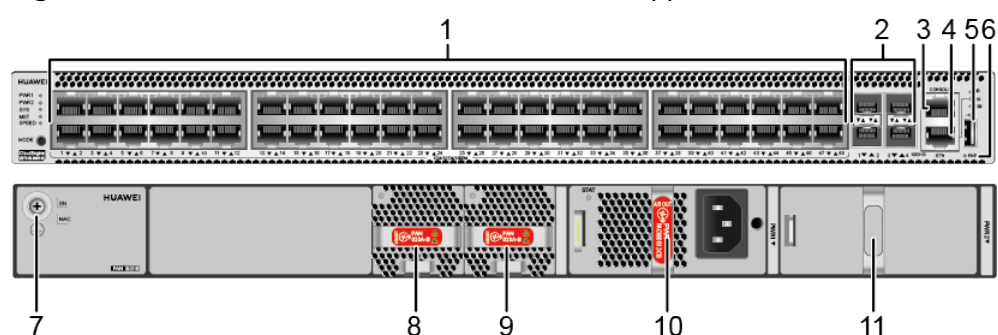
Series	Model	Software Version
S5731S-S	S5731S-S48T4X-A	02353AJC: V200R019C00 and later versions 02353AJC-003: V200R020C10 and later versions

## Appearance and Structure

**Figure 4-522** S5731S-S48T4X-A (02353AJC) appearance



**Figure 4-523** S5731S-S48T4X-A (02353AJC-003) appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	8	<p>Fan module slot 1</p> <p><b>NOTE</b> Applicable fan module: <b>7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</b></p>

9	<p>Fan module slot 2</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	1 0	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>
1 1	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1335](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1335** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1336](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1336** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1337](#).

**Table 4-1337** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 4-1338** describes the attributes of an ETH management port.

**Table 4-1338** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

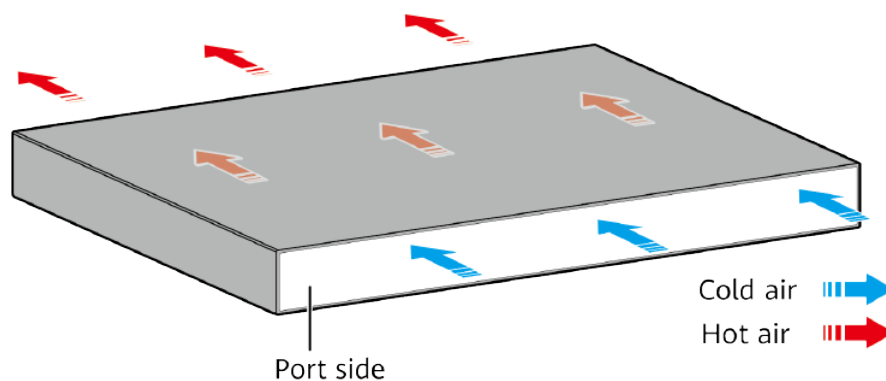
The S5731S-S48T4X-A has similar indicators to those on the S5731S-S48P4X-A except that the S5731S-S48T4X-A does not have a PoE mode indicator. For details, see **Indicator Description**.

## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation

The S5731S-S48T4X-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1339](#) lists technical specifications of the S5731S-S48T4X-A.

**Table 4-1339** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	55.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV



Item	Description
Power supply surge protection	<ul style="list-style-type: none"> <li>● Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>● Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>● Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>● Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)</li> </ul>
Weight (with packaging)	9.5 kg (20.94 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>● AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>● High-Voltage DC input: 240 V DC</li> <li>● DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>● High-Voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	124 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	101 W

Item	Description
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02353AJC 02353AJC-003

## 4.26.6 S5731S-S48T4X-A (98011848)

### Overview

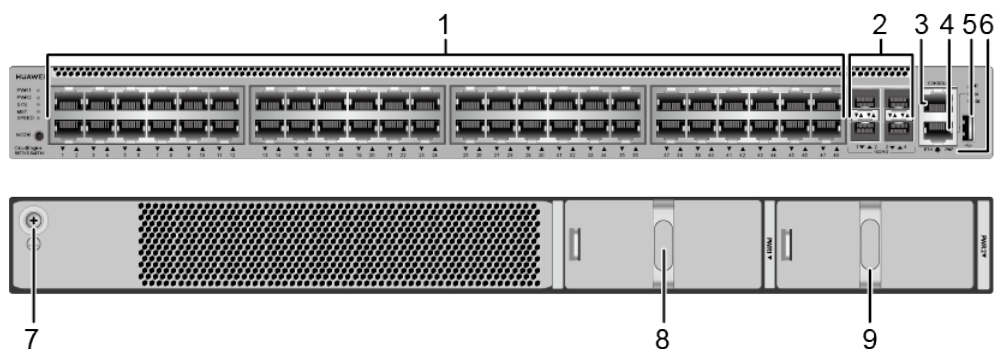
**Table 4-1340** Basic information about the S5731S-S48T4X-A

Item	Details
Description	S5731S-S48T4X Bundle(48*10/100/1000BASE-T ports, 4*10GE SFP+ ports, 1*AC power)
Part Number	98011848
Model	S5731S-S48T4X-A
First supported version	V200R021C10SPC600

Item	Details
Supported Patch Version	If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch.

## Components

Figure 4-524 S5731S-S48T4X-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ optical ports
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>
9	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>	-	-

## Ports

**Table 4-1341** Ports on the S5731S-S48T4X-A

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

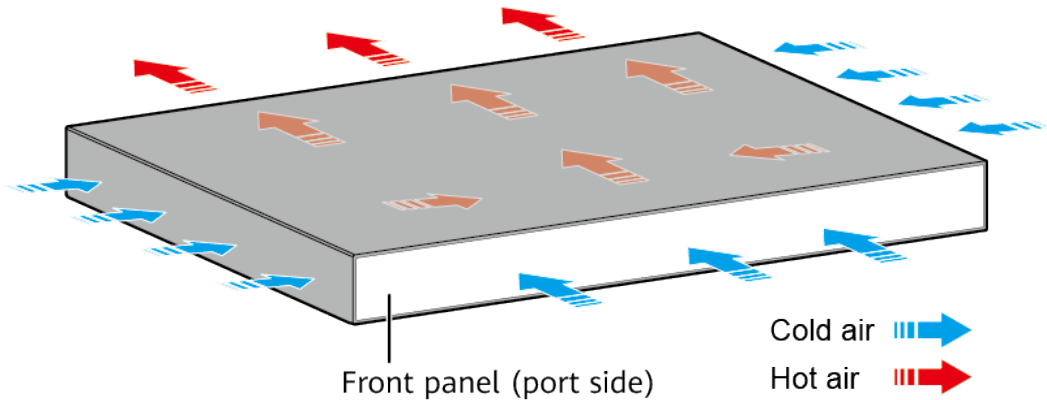
The S5731S-S48T4X-A has similar indicators to those on the S5731S-S48P4X-A except that the S5731S-S48T4X-A does not have a PoE mode indicator. For details, see the S5731S-S48P4X-A.

## Power Supply System

The switch can use a single power module or two power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1342** Technical specifications of the S5731S-S48T4X-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	5.77 kg (12.72 lb)
Weight with packaging [kg(lb)]	8.30 kg (18.3 lb)
Typical power consumption [W]	78 W
Typical heat dissipation [BTU/hour]	266.14 BTU/hour
Maximum power consumption [W]	111 W
Maximum heat dissipation [BTU/hour]	378.74 BTU/hour
Static power consumption [W]	50 W
MTBF [years]	73.81 years
MTTR [hours]	2 hours



Item	Specification
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	45.62 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.94 dB(A)
Number of card slots	0
Number of power slots	2
Number of fans modules	2
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). Devices cannot start when the temperature is lower than 0°C (32°F). The operating temperature of the switch is -5°C to +45°C (23°F to 113°F) when 10GE SFP+ optical modules with 40 km or longer transmission distances are used.
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: -48 V DC to -60 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC; 45–65 Hz</li> <li>High-voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum input current [A]	The current specifications are related to the pluggable power module. For details, see Pluggable Power Modules.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	<ul style="list-style-type: none"> <li>Configured with AC power modules: <math>\pm 6</math> kV in differential mode and <math>\pm 6</math> kV in common mode</li> <li>Configured with DC power modules: <math>\pm 2</math> kV in differential mode and <math>\pm 4</math> kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air flows in from the left, right, and front, and flows out from the rear.
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.26.7 S5731S-S48T4X-A1

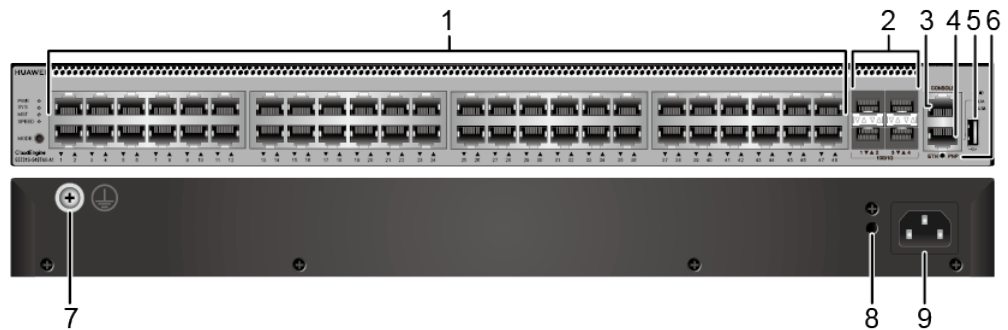
### Overview

**Table 4-1343** Basic information about the S5731S-S48T4X-A1

Item	Details
Description	S5731S-S48T4X-A1 (48*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)
Part Number	98011855
Model	S5731S-S48T4X-A1
First supported version	V200R021C10SPC600
Supported Patch Version	If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch.

### Components

**Figure 4-525** S5731S-S48T4X-A1 appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One ETH management port

5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Ports

**Table 4-1344** Ports on the S5731S-S48T4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

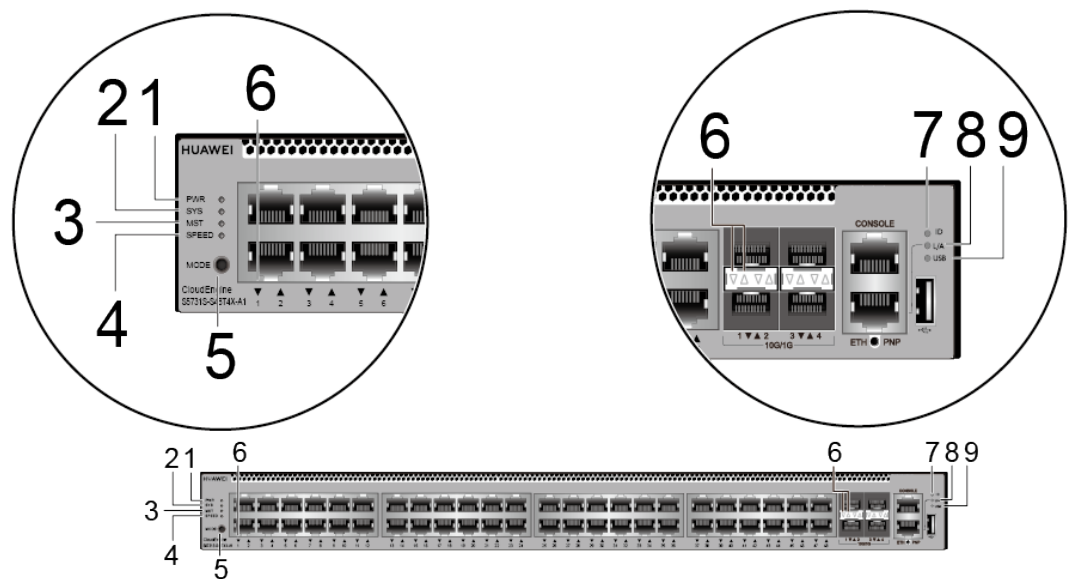
Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

Figure 4-526 Indicators on the S5731S-S48T4X-A1



**Table 4-1345** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.



No.	Indicator	Name	Color	Status	Description
			Green	Blinking	<ul style="list-style-type: none"><li>• If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li><li>• If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li></ul>
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.

No.	Indicator	Name	Color	Status	Description
5	MODE	Mode switch button	-	-	<ul style="list-style-type: none"><li>• When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li><li>• When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li><li>• When you press this button a third time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li></ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED indicator is off.</p> <p><b>NOTE</b></p> <p>Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"><li>• If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:<ul style="list-style-type: none"><li>• If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.</li><li>• If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.</li></ul></li><li>• If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.</li></ul>

No.	Indicator	Name	Color	Status	Description
6	-	Electrical service port indicator (one indicator for each port)	Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1346</a> and <a href="#">Table 4-1347</a> .
		Optical service port indicator (two indicators for each port)	Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		
7	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
8	L/A	ETH port indicator	-	Off	The ETH port is not connected.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
9	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1346** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s.

**Table 4-1347** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode (LINK indicator)	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
Default mode (ACT indicator)	-	Off	The port is not connected or has been shut down, or no data is transmitted or received.
	Yellow	Blinking	The port is sending or receiving data.

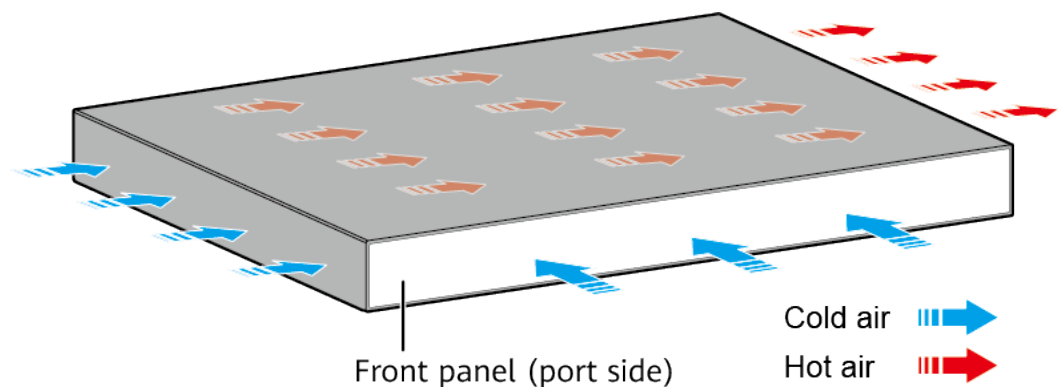
Display Mode	Color	Status	Description
Speed mode (LINK indicator)	-	Off	The port is not connected or has been shut down.
	Green	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s. 1000M port: The port is operating at 1000 Mbit/s.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1348** Technical specifications of the S5731S-S48T4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 355.0 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.21 kg (7.08 lb)
Weight with packaging [kg(lb)]	4.57 kg (10.08 lb)
Typical power consumption [W]	76 W
Typical heat dissipation [BTU/hour]	259.32 BTU/hour
Maximum power consumption [W]	102 W
Maximum heat dissipation [BTU/hour]	348.03 BTU/hour
Static power consumption [W]	48 W
MTBF [years]	43.17 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	44.90 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.21 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). Devices cannot start when the temperature is lower than 0°C (32°F). The operating temperature of the switch is -5°C to +45°C (23°F to 113°F) when 10GE SFP+ optical modules with 40 km or longer transmission distances are used.
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	3 A
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ±7 kV
Power supply surge protection [kV]	±6 kV in differential mode, ±6 kV in common mode
Ingress protection level (dustproof/waterproof)	IP20



Item	Specification
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.26.8 S5731S-S48P4X-A (02353AJJ/ 02353AJJ-001/02353AJJ-003)

### Version Mapping

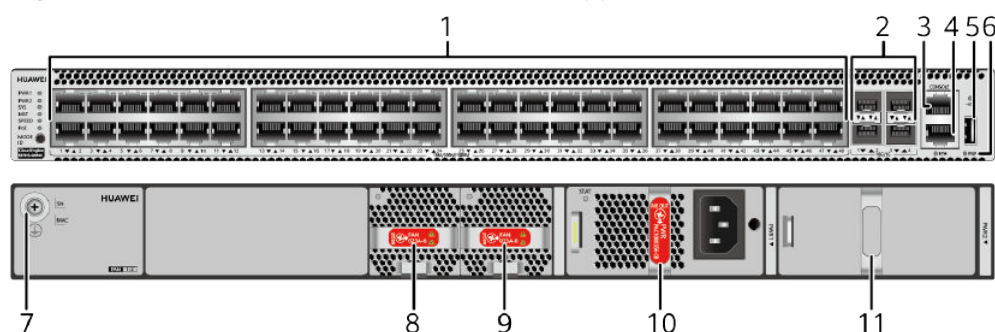
**Table 4-1349** lists the mapping between the S5731S-S48P4X-A chassis and software versions.

**Table 4-1349** Version mapping

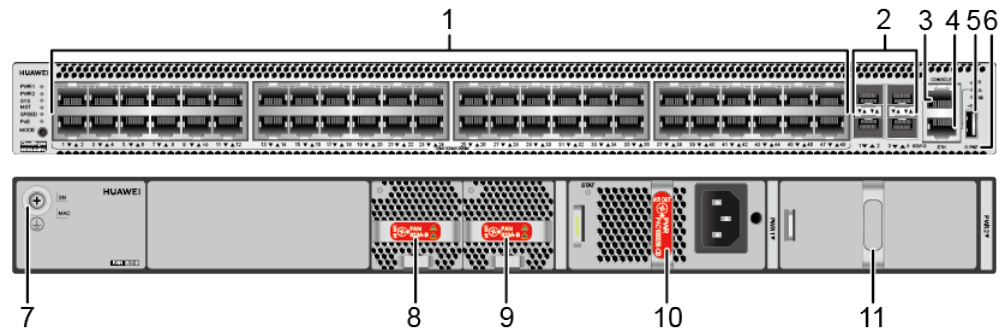
Series	Model	Software Version
S5731S-S	S5731S-S48P4X-A	02353AJJ: V200R019C00 and later versions 02353AJJ-001: V200R020C10 and later versions 02353AJJ-003: V200R021C10SPC600 and later versions (If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch.)

### Appearance and Structure

**Figure 4-527** S5731S-S48P4X-A (02353AJJ) appearance



**Figure 4-528** S5731S-S48P4X-A (02353AJJ-001/02353AJJ-003) appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Fan module slot 1</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>
9	<p>Fan module slot 2</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	10	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a> (applicable in V200R021C10 and later versions)</li> </ul>
11	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a> (applicable in V200R021C10 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1350](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1350** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1351](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1351** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1352](#).

**Table 4-1352** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1353](#) describes the attributes of an ETH management port.

**Table 4-1353** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

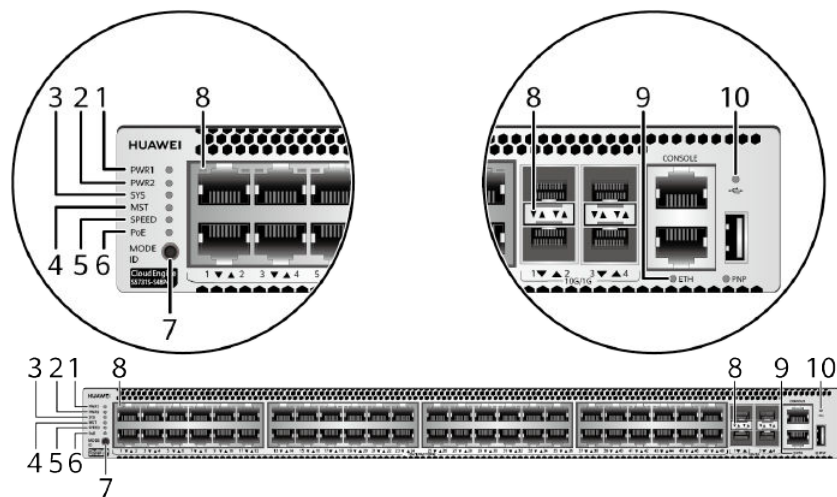
## Indicator Description

 NOTE

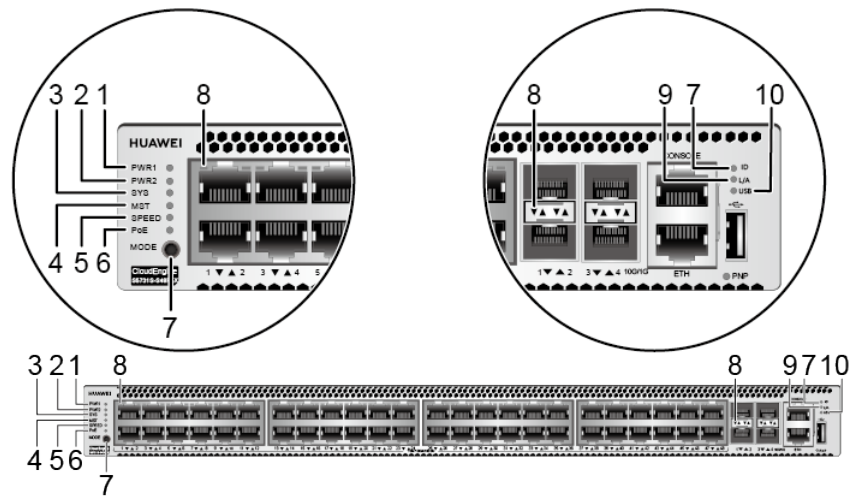
Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-529** Indicators on the S5731S-S48P4X-A (02353AJJ)



**Figure 4-530** Indicators on the S5731S-S48P4X-A (02353AJJ-001/02353AJJ-003)



**Table 4-1354** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.

No.	Indicator	Name	Color	Status	Description
			Yellow	Steady on	<p>The switch has two power modules installed. Any of the following situations occurs in power module slot 2:</p> <ul style="list-style-type: none"> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>• If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>• If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.



No.	Indicator	Name	Color	Status	Description
			Green	Blinking	<ul style="list-style-type: none"><li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li><li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li></ul>
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p>
	ID	ID indicator <b>NOTE</b> The mode switch button on the 02353AJ has an ID indicator.	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.

No.	Indicator	Name	Color	Status	Description
8	-	Electrical service port indicator (one indicator for each port)	The indicator in the upper left corner of a port indicates the indicator of a port at the top, and the indicator in the upper right corner indicates the indicator of a port at the bottom.		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1355</a> and <a href="#">Table 4-1356</a> .
		Optical service port indicator (two indicators for each port)	Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		
9	ETH	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.

No.	Indicator	Name	Color	Status	Description
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1355** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	Green	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
		Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
		Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.

**Table 4-1356** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s. 1000M port: The port is operating at 1000 Mbit/s.

## Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1357** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	-	760 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 25</li> </ul>
1000 W AC (110 V)	-	665 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 43</li> <li>802.3at (30 W per port): 22</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	Versions earlier than V200R021C10: 1330 W V200R021C10 and later versions: 1520 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>

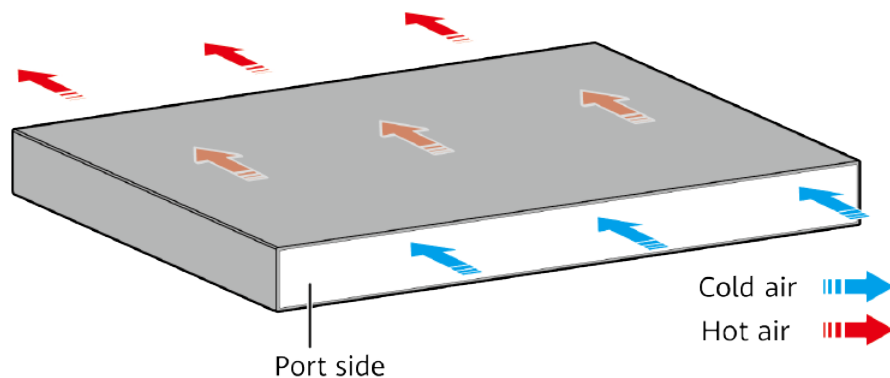
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
600 W AC (220 V)	-	380 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
600 W AC (110 V)	-	95 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 6</li> <li>802.3at (30 W per port): 3</li> </ul>
600 W AC (220 V)	600 W AC (220 V)	950 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 31</li> </ul>
600 W AC (110 V)	600 W AC (110 V)	380 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1330 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 44</li> </ul>

**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

## Heat Dissipation

The S5731S-S48P4X-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1358](#) lists technical specifications of the S5731S-S48P4X-A.

**Table 4-1358** Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	54.96 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)</li> </ul>
Weight (with packaging)	9.9 kg (21.83 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported



Item	Description
Rated voltage range	<ul style="list-style-type: none"> <li>● AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>● High-Voltage DC input: 240 V DC</li> <li>● DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>● High-Voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>● Not providing the PoE function: 132 W</li> <li>● 100% PoE loads: 1750 W (PoE: 1440 W)</li> </ul>
Typical power consumption (30% of traffic load, tested according to ATIS standard)	108 W
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 62.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>● EMC certification</li> <li>● Safety certification</li> <li>● Manufacturing certification</li> </ul>

Item	Description
Part number	02353AJJ 02353AJJ-001 02353AJJ-003

## 4.26.9 S5731S-S32ST4X-A (98011814)

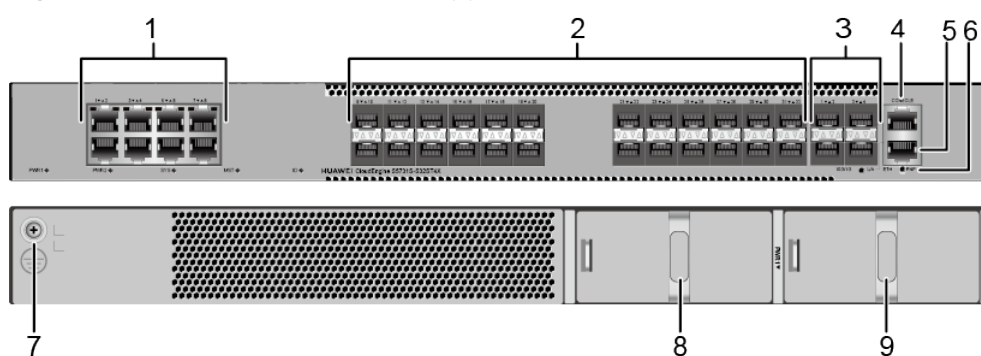
### Overview

**Table 4-1359** Basic information about the S5731S-S32ST4X-A

Item	Details
Description	S5731S-S32ST4X Bundle(8*10/100/1000BASE-T ports, 24*GE SFP ports, 4*10GE SFP+ ports, with AC power supply)
Part Number	98011814
Model	S5731S-S32ST4X-A
First supported version	V200R021C01

### Components

**Figure 4-531** S5731S-S32ST4X-A appearance



1	Eight 10/100/1000BASE-T ports	2	Twenty-four 100/1000BASE-X ports  <b>NOTE</b> In V200R023C00 and later versions, 100/1000BASE-X ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.
3	Four 10GE SFP+ ports	4	One console port
5	One ETH management port	6	One PNP button  <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw  <b>NOTE</b> It is used with a <b>ground cable</b> .	8	Power module slot 1  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>
9	Power module slot 2  <b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>	-	-

## Ports

**Table 4-1360** Ports on the S5731S-S32ST4X-A

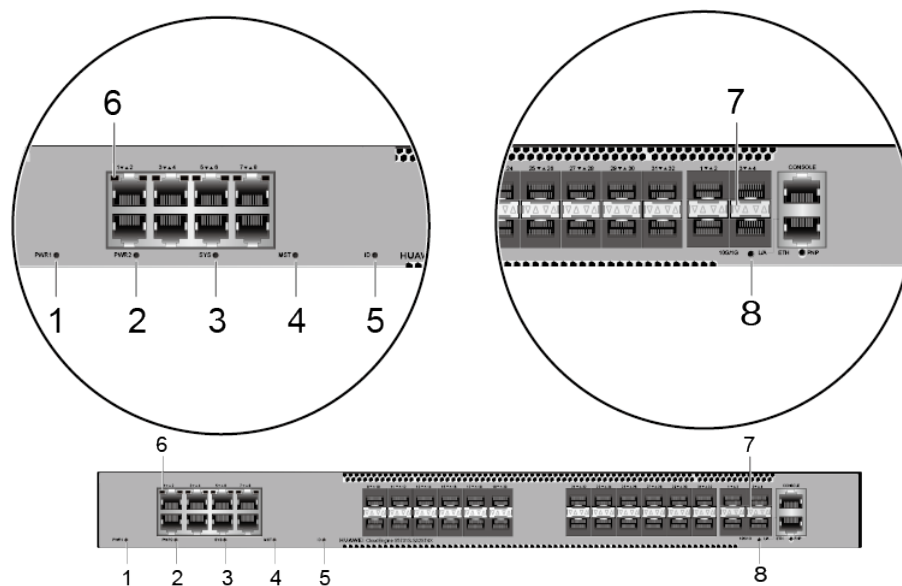
Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s.  In V200R023C00 and later versions, 100/1000BASE-X ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.	<ul style="list-style-type: none"><li>• <b>FE SFP/eSFP optical modules</b></li><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</b></li></ul>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

Figure 4-532 Indicators on the S5731S-S32ST4X-A



**Table 4-1361** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	The switch is not the master switch in a stack.
			Green	Blinking	The switch is the master switch in a stack or a standalone switch.
5	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
6	-	Service port indicator (electrical port) The indicator in the upper left corner of a port indicates the indicator of a port at the top, and the indicator in the upper right	-	Off	The port is not connected or has been shut down.
			Green	Steady on	A link has been established on the port.



No.	Indicator	Name	Color	Status	Description
		corner indicates the indicator of a port at the bottom.		Blinking	The port is sending or receiving data.
7	-	Service port indicator (optical port)  Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green).  Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead	Green	Off	The port is not connected or has been shut down.
				Steady on	A link has been established on the port.
			Yellow	Off	The port is not sending or receiving data.

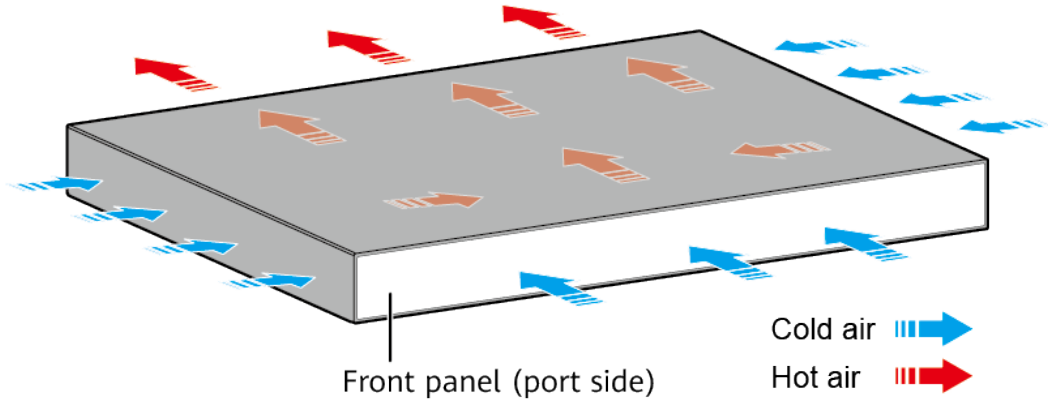
No.	Indicator	Name	Color	Status	Description
		indicates a port at the top. <b>NOTE</b> If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.		Blinking	The port is sending or receiving data.
8	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The Eth port is sending or receiving data.

## Power Supply System

The switch can use a single power module or two power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation System

The switch has three built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1362** Technical specifications of the S5731S-S32ST4X-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.40 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.40 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	5.68 kg (12.52 lb)
Weight with packaging [kg(lb)]	8.21 kg (18.1 lb)
Typical power consumption [W]	73.56 W
Typical heat dissipation [BTU/hour]	250.99 BTU/hour
Maximum power consumption [W]	104.82 W (150 W AC or 180 W DC) 119.23 W (600 W AC)

Item	Specification
Maximum heat dissipation [BTU/hour]	357.66 (150 W AC or 180 W DC) 406.82 (600 W AC)
Static power consumption [W]	44.5 W
MTBF [years]	71.54 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	45.47 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.79 dB(A)
Number of card slots	0
Number of power slots	2
Number of fans modules	3
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: -48 V DC to -60 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC; 45 Hz to 65 Hz</li> <li>High-voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum input current [A]	The current specifications depend on the pluggable power modules in use. For details, see the related power module specifications.
Memory	2 GB
Flash memory	The physical space is 1 GB. You can run the display version command to view the actual available space.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	<ul style="list-style-type: none"> <li>Configured with AC power modules: <math>\pm 6</math> kV in differential mode and <math>\pm 6</math> kV in common mode</li> <li>Configured with DC power modules: <math>\pm 2</math> kV in differential mode and <math>\pm 4</math> kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left, front and right, air exhaustion from behind
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.26.10 S5731S-S32ST4X-A (98011814-001)

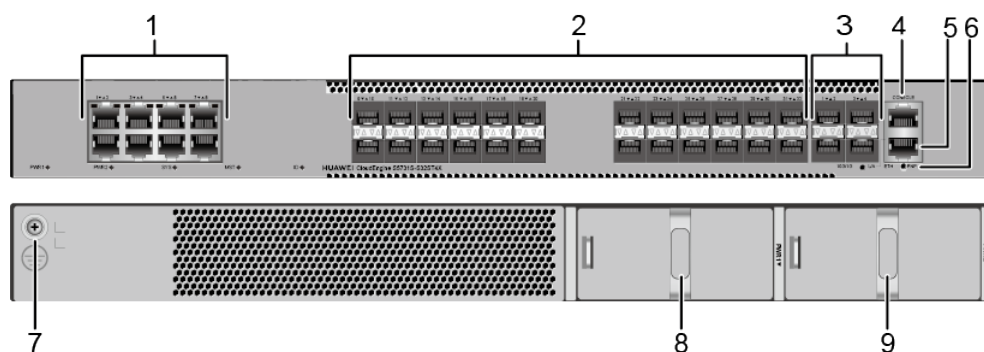
### Overview

**Table 4-1363** Basic information about the S5731S-S32ST4X-A

Item	Details
Description	S5731S-S32ST4X Bundle(8*10/100/1000BASE-T ports, 24*GE SFP ports, 4*10GE SFP+ ports, with AC power supply)
Part Number	98011814-001
Model	S5731S-S32ST4X-A
First supported version	V200R021C10SPC600

### Components

**Figure 4-533** S5731S-S32ST4X-A appearance



1	Eight 10/100/1000BASE-T ports	2	Twenty-four 100/1000BASE-X ports <b>NOTE</b> In V200R023C00 and later versions, 100/1000BASE-X ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.
3	Four 10GE SFP+ ports	4	One console port

5	One ETH management port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>
9	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>	-	-



## Ports

**Table 4-1364** Ports on the S5731S-S32ST4X-A

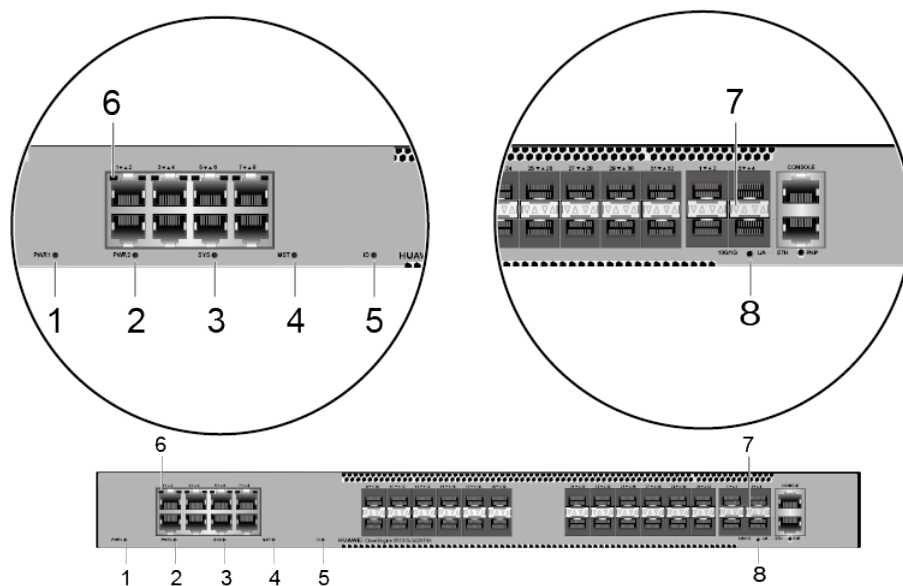
Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>
100/1000BASE-X port	SFP	<p>A 100/1000BASE-X port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s.</p> <p>In V200R023C00 and later versions, 100/1000BASE-X ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"><li>• <a href="#">FE SFP/eSFP optical modules</a></li><li>• <a href="#">GE eSFP optical modules</a></li><li>• <a href="#">GE-CWDM eSFP optical modules</a></li><li>• <a href="#">GE-DWDM eSFP optical modules</a></li><li>• <a href="#">GE SFP copper module</a></li><li>• <a href="#">2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</a></li></ul>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

Figure 4-534 Indicators on the S5731S-S32ST4X-A



**Table 4-1365** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	The switch is not the master switch in a stack.
			Green	Blinking	The switch is the master switch in a stack or a standalone switch.
5	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
6	-	Service port indicator (electrical port) The indicator in the upper left corner of a port indicates the indicator of a port at the top, and the indicator in the upper right	-	Off	The port is not connected or has been shut down.
			Green	Steady on	A link has been established on the port.

No.	Indicator	Name	Color	Status	Description
		corner indicates the indicator of a port at the bottom.		Blinking	The port is sending or receiving data.
7	-	Service port indicator (optical port)  Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green).  Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead	Green	Off	The port is not connected or has been shut down.
				Steady on	A link has been established on the port.
			Yellow	Off	The port is not sending or receiving data.

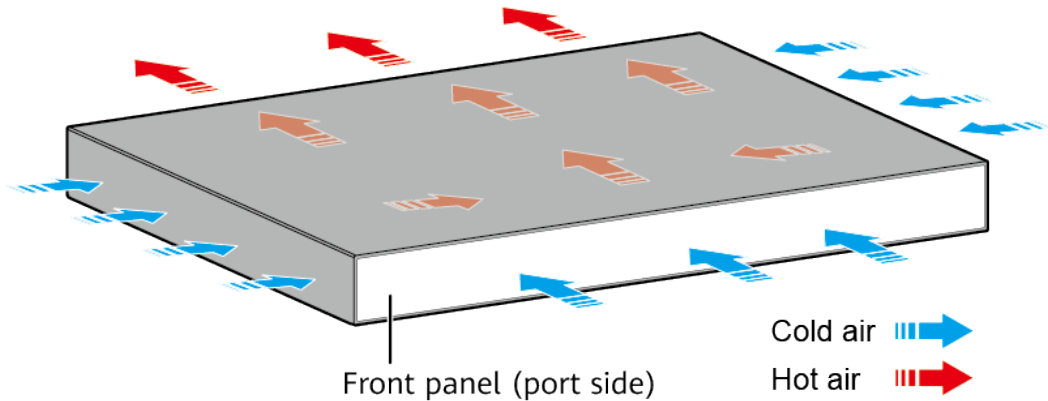
No.	Indicator	Name	Color	Status	Description
		indicates a port at the top. <b>NOTE</b> If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.		Blinking	The port is sending or receiving data.
8	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The Eth port is sending or receiving data.

## Power Supply System

The switch can use a single power module or two power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation System

The switch has three built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1366** Technical specifications of the S5731S-S32ST4X-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	5.68 kg (12.52 lb)
Weight with packaging [kg(lb)]	8.21 kg (18.1 lb)
Typical power consumption [W]	73.56 W
Typical heat dissipation [BTU/hour]	250.99 BTU/hour
Maximum power consumption [W]	104.82 W (150 W AC or 180 W DC) 119.23 W (600 W AC)



Item	Specification
Maximum heat dissipation [BTU/hour]	357.66 (150 W AC or 180 W DC) 406.82 (600 W AC)
Static power consumption [W]	44.5 W
MTBF [years]	71.54 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	45.47 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.79 dB(A)
Number of card slots	0
Number of power slots	2
Number of fans modules	3
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.44 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	–40°C to +70°C (–40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Storage altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: –48 V DC to –60 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"><li>AC input: 90 V AC to 290 V AC; 45–65 Hz</li><li>High-voltage DC input: 190 V DC to 290 V DC</li><li>DC input: -38.4 V DC to -72 V DC</li></ul>
Maximum input current [A]	The current specifications are related to the pluggable power module. For details, see Pluggable Power Modules.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	<ul style="list-style-type: none"><li>Configured with AC power modules: <math>\pm 6</math> kV in differential mode and <math>\pm 6</math> kV in common mode</li><li>Configured with DC power modules: <math>\pm 2</math> kV in differential mode and <math>\pm 4</math> kV in common mode</li></ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from left, front, and right and air exhaust from rear
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.26.11 S5731S-S32ST4X-A1 (98011809)

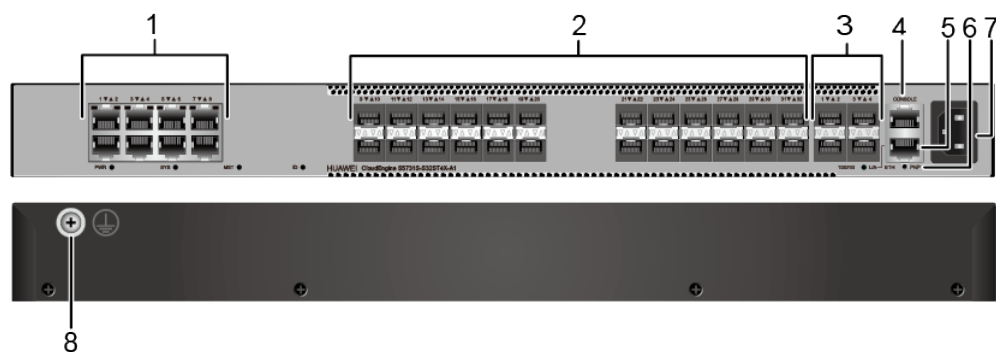
### Overview

Table 4-1367 Basic information about the S5731S-S32ST4X-A1

Item	Details
Description	S5731S-S32ST4X-A1(8*10/100/1000BASE-T ports, 24*GE SFP ports, 4*10GE SFP+ ports, AC power, front access)
Part Number	98011809
Model	S5731S-S32ST4X-A1
First supported version	V200R021C01

### Components

Figure 4-535 S5731S-S32ST4X-A1 appearance



1	Eight 10/100/1000BASE-T ports	2	Twenty-four 100/1000BASE-X ports <b>NOTE</b> In V200R023C00 and later versions, 100/1000BASE-X ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.
3	Four 10GE SFP+ ports	4	One console port

5	One ETH management port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	8	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .

## Ports

**Table 4-1368** Ports on the S5731S-S32ST4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

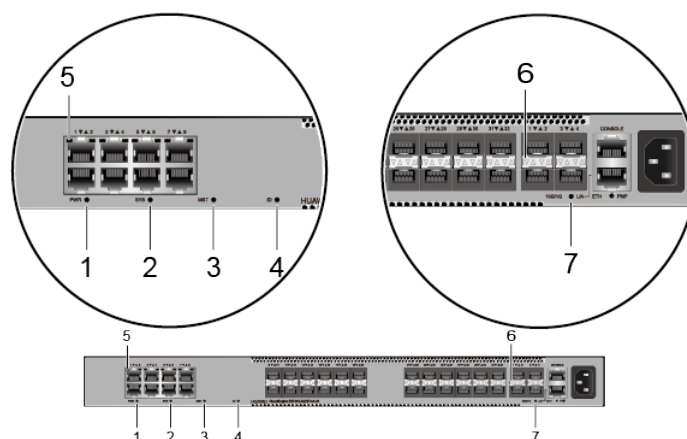
Port	Connector Type	Description	Available Components
100/1000BASE-X port	SFP	<p>A 100/1000BASE-X port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s.</p> <p>In V200R023C00 and later versions, 100/1000BASE-X ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"> <li>● <a href="#">FE SFP/eSFP optical modules</a></li> <li>● <a href="#">GE eSFP optical modules</a></li> <li>● <a href="#">GE-CWDM eSFP optical modules</a></li> <li>● <a href="#">GE-DWDM eSFP optical modules</a></li> <li>● <a href="#">GE SFP copper module</a></li> <li>● <a href="#">2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</a></li> </ul>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li><li>• <b>10GE-CWDM SFP+ optical modules</b></li><li>• <b>10GE-DWDM SFP+ optical modules</b></li><li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li><li>• <b>3 m and 10 m SFP+ AOC cables</b></li><li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li></ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

**Figure 4-536** Indicators on the S5731S-S32ST4X-A1





**Table 4-1369** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
3	MST	Stack indicator	-	Off	The switch is not the master switch in a stack.
			Green	Blinking	The switch is the master switch in a stack or a standalone switch.
4	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
5	-	Service port indicator (electrical port) The indicator in the upper left corner of a port	-	Off	The port is not connected or has been shut down.
			Green	Steady on	A link has been established on the port.

No.	Indicator	Name	Color	Status	Description
		indicates the indicator of a port at the top, and the indicator in the upper right corner indicates the indicator of a port at the bottom.		Blinking	The port is sending or receiving data.
6	-	Service port indicator (optical port)  Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports.	Green	Off	The port is not connected or has been shut down.
				Steady on	A link has been established on the port.
			Yellow	Off	The port is not sending or receiving data.

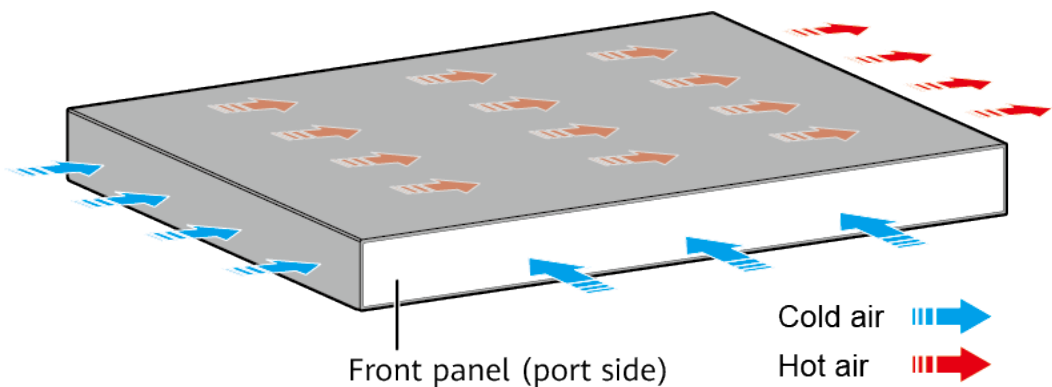
No.	Indicator	Name	Color	Status	Description
		A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top. <b>NOTE</b> If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.		Blinking	The port is sending or receiving data.
7	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The Eth port is sending or receiving data.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1370** Technical specifications of the S5731S-S32ST4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.40 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.40 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90 mm x 550 mm x 355 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.13 kg (6.9 lb)
Weight with packaging [kg(lb)]	4.49 kg (9.9 lb)

Item	Specification
Typical power consumption [W]	66.85 W
Typical heat dissipation [BTU/hour]	228.10 BTU/hour
Maximum power consumption [W]	93.92 W
Maximum heat dissipation [BTU/hour]	320.46 BTU/hour
Static power consumption [W]	41.71 W
MTBF [years]	32.56 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	41.42 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.74 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	- AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	- AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	3 A
Memory	2 GB

Item	Specification
Flash memory	The physical space is 1 GB. You can run the display version command to view the actual available space.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode; $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.26.12 S5731S-S32ST4X-A1 (98011809-001)

### Overview

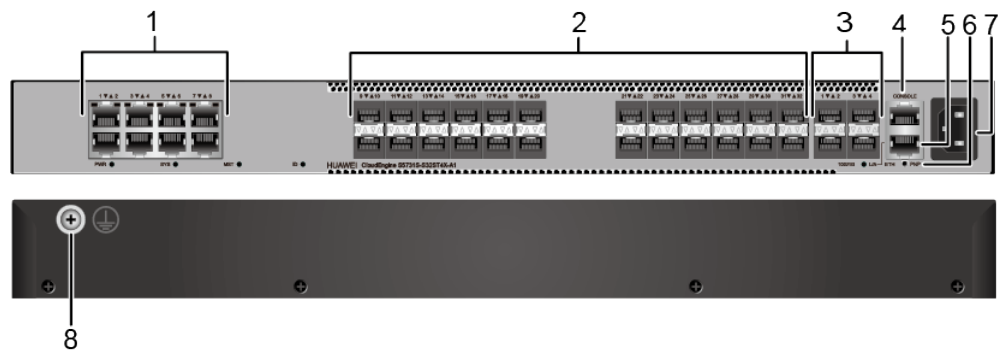
**Table 4-1371** Basic information about the S5731S-S32ST4X-A1

Item	Details
Description	S5731S-S32ST4X-A1(8*10/100/1000BASE-T ports, 24*GE SFP ports, 4*10GE SFP+ ports, AC power, front access)
Part Number	98011809-001

Item	Details
Model	S5731S-S32ST4X-A1
First supported version	V200R021C10SPC600

## Components

Figure 4-537 S5731S-S32ST4X-A1 appearance



1	Eight 10/100/1000BASE-T ports	2	Twenty-four 100/1000BASE-X ports <b>NOTE</b> In V200R023C00 and later versions, 100/1000BASE-X ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.
3	Four 10GE SFP+ ports	4	One console port
5	One ETH management port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .	8	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .



## Ports

**Table 4-1372** Ports on the S5731S-S32ST4X-A1

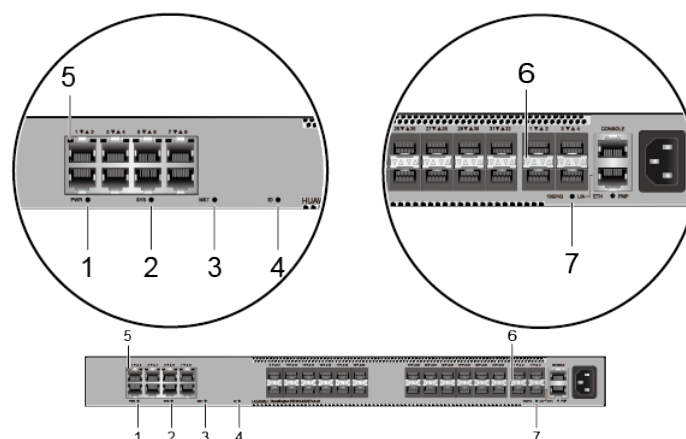
Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s.  In V200R023C00 and later versions, 100/1000BASE-X ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.	<ul style="list-style-type: none"><li>• <b>FE SFP/eSFP optical modules</b></li><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</b></li></ul>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

**Figure 4-538** Indicators on the S5731S-S32ST4X-A1



**Table 4-1373** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
3	MST	Stack indicator	-	Off	The switch is not the master switch in a stack.
			Green	Blinking	The switch is the master switch in a stack or a standalone switch.
4	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
5	-	Service port indicator (electrical port) The indicator in the upper left corner of a port	-	Off	The port is not connected or has been shut down.
			Green	Steady on	A link has been established on the port.

No.	Indicator	Name	Color	Status	Description
		indicates the indicator of a port at the top, and the indicator in the upper right corner indicates the indicator of a port at the bottom.		Blinking	The port is sending or receiving data.
6	-	Service port indicator (optical port) Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports.	Green	Off	The port is not connected or has been shut down.
				Steady on	A link has been established on the port.
			Yellow	Off	The port is not sending or receiving data.

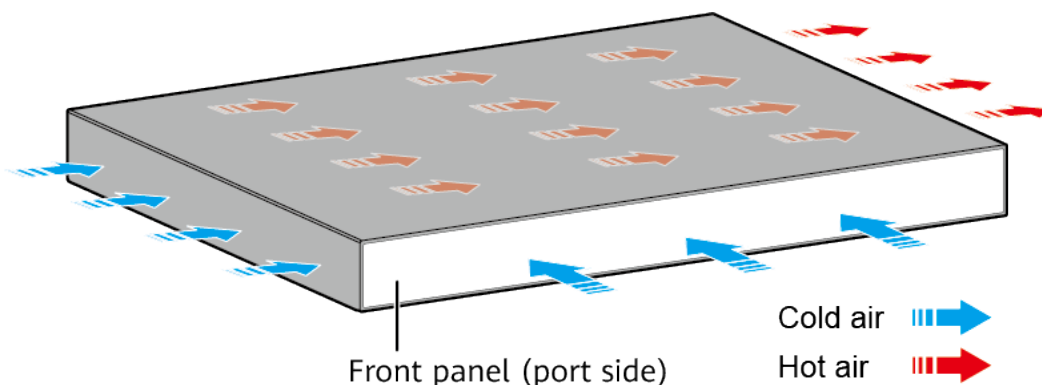
No.	Indicator	Name	Color	Status	Description
		A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top. <b>NOTE</b> If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.		Blinking	The port is sending or receiving data.
7	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The Eth port is sending or receiving data.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1374** Technical specifications of the S5731S-S32ST4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90 mm x 550 mm x 355 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.13 kg (6.9 lb)
Weight with packaging [kg(lb)]	4.49 kg (9.9 lb)

Item	Specification
Typical power consumption [W]	66.85 W
Typical heat dissipation [BTU/hour]	228.10 BTU/hour
Maximum power consumption [W]	93.92 W
Maximum heat dissipation [BTU/hour]	320.46 BTU/hour
Static power consumption [W]	41.71 W
MTBF [years]	32.56 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	41.42 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.74 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.44 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)



Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	–40°C to +70°C (–40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Storage altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	- AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	- AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	3 A
Memory	2 GB

Item	Specification
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	Differential mode: $\pm 6$ kV; common mode: $\pm 6$ kV
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.26.13 S5731S-S48S4X-A (98011806)

#### Overview

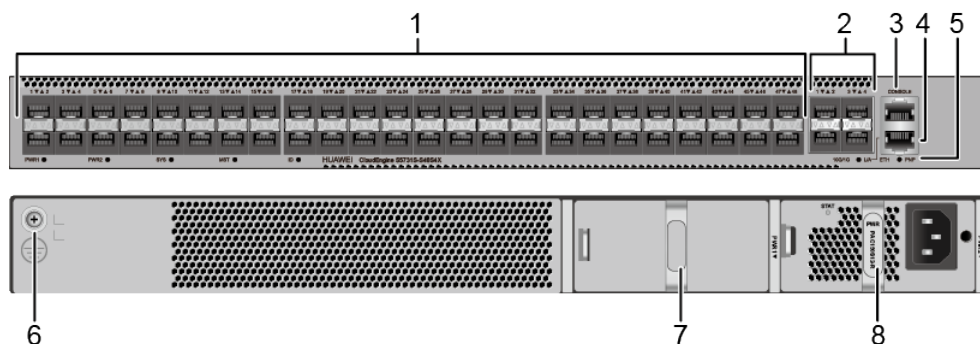
**Table 4-1375** Basic information about the S5731S-S48S4X-A

Item	Details
Description	S5731S-S48S4X Bundle(48*GE SFP ports, 4*10GE SFP+ ports, with AC power supply)
Part Number	98011806
Model	S5731S-S48S4X-A

Item	Details
First supported version	V200R021C01

## Components

Figure 4-539 S5731S-S48S4X-A appearance



1	Forty-eight 100/1000BASE-X ports <b>NOTE</b> In V200R023C00 and later versions, ports numbered from GE5 to GE48 can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.	2	Four 10GE SFP+ ports
3	One console port	4	One ETH management port
5	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .

7	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>	8	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>
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## Ports

**Table 4-1376** Ports on the S5731S-S48S4X-A

Port	Connector Type	Description	Available Components
100/1000BASE-X port	SFP	<p>A 100/1000BASE-X port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s.</p> <p>In V200R023C00 and later versions, ports numbered from GE5 to GE48 can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"> <li>• <a href="#">FE SFP/eSFP optical modules</a></li> <li>• <a href="#">GE eSFP optical modules</a></li> <li>• <a href="#">GE-CWDM eSFP optical modules</a></li> <li>• <a href="#">GE-DWDM eSFP optical modules</a></li> <li>• <a href="#">GE SFP copper module</a></li> <li>• <a href="#">2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</a></li> </ul>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

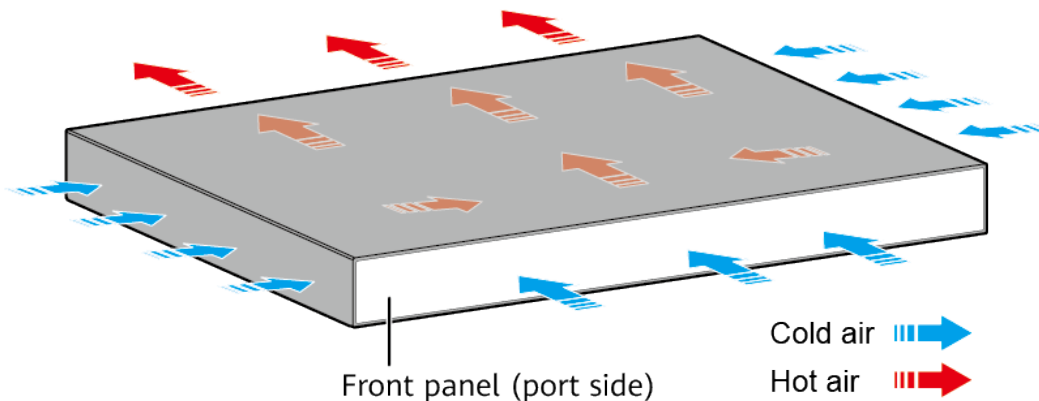
The S5731S-S48S4X-A has the same types of indicators as the S5731S-S32ST4X-A. For details, see the S5731S-S32ST4X-A.

## Power Supply System

The switch can use a single power module or two power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation System

The switch has three built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1377** Technical specifications of the S5731S-S48S4X-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.40 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.40 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	5.9 kg (13.01 lb)
Weight with packaging [kg(lb)]	8.43 kg (18.58 lb)
Typical power consumption [W]	93.69 W
Typical heat dissipation [BTU/hour]	319.68 BTU/hour
Maximum power consumption [W]	128.89 W (150 W AC or 180 W DC) 141.96 W (600 W AC)
Maximum heat dissipation [BTU/hour]	439.79 (150 W AC or 180 W DC) 484.38 (600 W AC)
Static power consumption [W]	50.44 W

Item	Specification
MTBF [years]	64.97 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	45.47 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.79 dB(A)
Number of card slots	0
Number of power slots	2
Number of fans modules	3
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)



Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: -48 V DC to -60 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"><li>AC input: 90 V AC to 290 V AC; 45 Hz to 65 Hz</li><li>High-voltage DC input: 190 V DC to 290 V DC</li><li>DC input: -38.4 V DC to -72 V DC</li></ul>
Maximum input current [A]	The current specifications depend on the pluggable power modules in use. For details, see the related power module specifications.
Memory	2 GB
Flash memory	The physical space is 1 GB. You can run the display version command to view the actual available space.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	<ul style="list-style-type: none"><li>Configured with AC power modules: <math>\pm 6</math> kV in differential mode and <math>\pm 6</math> kV in common mode</li><li>Configured with DC power modules: <math>\pm 2</math> kV in differential mode and <math>\pm 4</math> kV in common mode</li></ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left, front and right, air exhaustion from behind
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.26.14 S5731S-S48S4X-A (98011806-001)

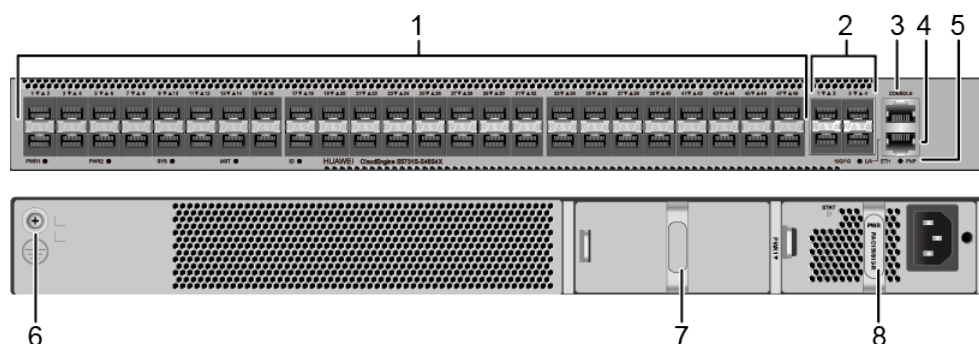
### Overview

Table 4-1378 Basic information about the S5731S-S48S4X-A

Item	Details
Description	S5731S-S48S4X Bundle(48*GE SFP ports, 4*10GE SFP+ ports, with AC power supply)
Part Number	98011806-001
Model	S5731S-S48S4X-A
First supported version	V200R021C10SPC600

### Components

Figure 4-540 S5731S-S48S4X-A appearance



1	Forty-eight 100/1000BASE-X ports <b>NOTE</b> In V200R023C00 and later versions, ports numbered from GE5 to GE48 can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.	2	Four 10GE SFP+ ports
3	One console port	4	One ETH management port

5	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>
7	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>	8	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> </ul>

## Ports

**Table 4-1379** Ports on the S5731S-S48S4X-A

Port	Connector Type	Description	Available Components
100/1000BASE-X port	SFP	<p>A 100/1000BASE-X port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s.</p> <p>In V200R023C00 and later versions, ports numbered from GE5 to GE48 can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"> <li>• <b>FE SFP/eSFP optical modules</b></li> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</b></li> </ul>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li><li>• <b>10GE-CWDM SFP+ optical modules</b></li><li>• <b>10GE-DWDM SFP+ optical modules</b></li><li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li><li>• <b>3 m and 10 m SFP+ AOC cables</b></li><li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li></ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

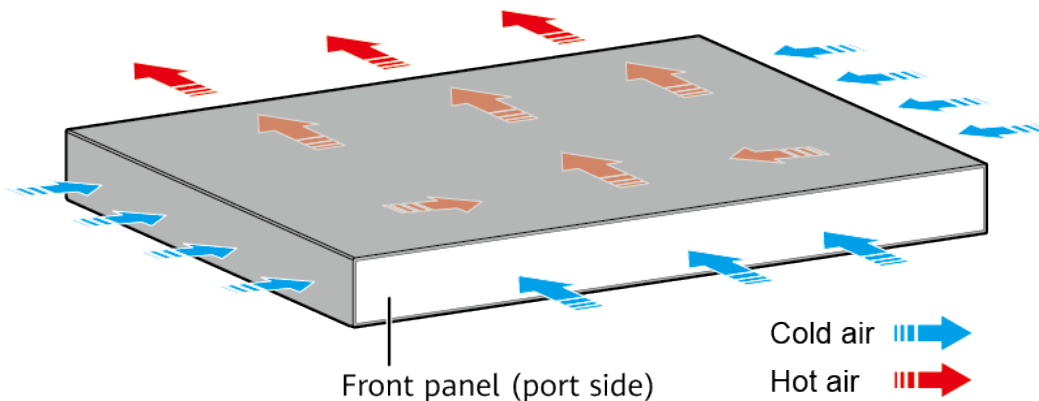
The S5731S-S48S4X-A has the same types of indicators as the S5731S-S32ST4X-A. For details, see the S5731S-S32ST4X-A.

## Power Supply System

The switch can use a single power module or two power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation System

The switch has three built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1380** Technical specifications of the S5731S-S48S4X-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	5.9 kg (13.01 lb)
Weight with packaging [kg(lb)]	8.43 kg (18.58 lb)
Typical power consumption [W]	93.69 W
Typical heat dissipation [BTU/hour]	319.68 BTU/hour
Maximum power consumption [W]	128.89 W (150 W AC or 180 W DC) 141.96 W (600 W AC)
Maximum heat dissipation [BTU/hour]	439.79 (150 W AC or 180 W DC) 484.38 (600 W AC)
Static power consumption [W]	50.44 W



Item	Specification
MTBF [years]	64.97 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	45.47 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.79 dB(A)
Number of card slots	0
Number of power slots	2
Number of fans modules	3
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.44 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	–40°C to +70°C (–40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Storage altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: –48 V DC to –60 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC; 45–65 Hz</li> <li>High-voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum input current [A]	The current specifications are related to the pluggable power module. For details, see Pluggable Power Modules.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	<ul style="list-style-type: none"> <li>Configured with AC power modules: <math>\pm 6</math> kV in differential mode and <math>\pm 6</math> kV in common mode</li> <li>Configured with DC power modules: <math>\pm 2</math> kV in differential mode and <math>\pm 4</math> kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from left, front, and right and air exhaust from rear
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.26.15 S5731S-S48S4X-A1 (98011802)

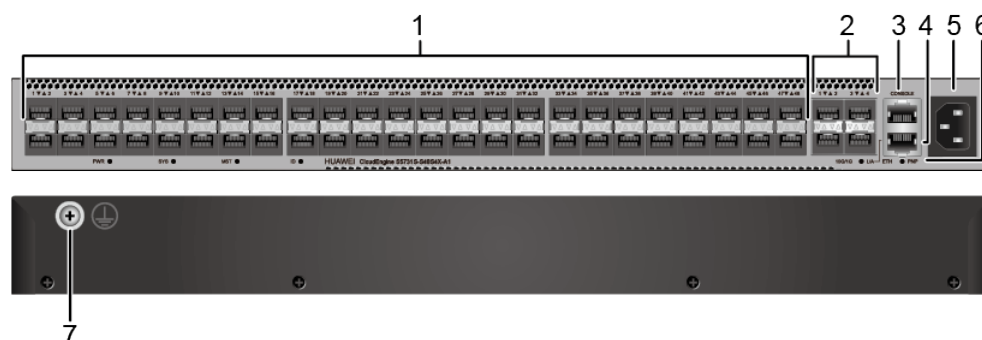
### Overview

Table 4-1381 Basic information about the S5731S-S48S4X-A1

Item	Details
Description	S5731S-S48S4X-A1 (48*GE SFP ports, 4*10GE SFP+ ports, AC power, front access)
Part Number	98011802
Model	S5731S-S48S4X-A1
First supported version	V200R021C01

### Components

Figure 4-541 S5731S-S48S4X-A1 appearance



1	Forty-eight 100/1000BASE-X ports <b>NOTE</b> In V200R023C00 and later versions, ports numbered from GE5 to GE48 can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.	2	Four 10GE SFP+ ports
3	One console port	4	One ETH management port

5	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	-	-

## Ports

**Table 4-1382** Ports on the S5731S-S48S4X-A1

Port	Connector Type	Description	Available Components
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s. In V200R023C00 and later versions, ports numbered from GE5 to GE48 can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.	<ul style="list-style-type: none"> <li>• <b>FE SFP/eSFP optical modules</b></li> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</b></li> </ul>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

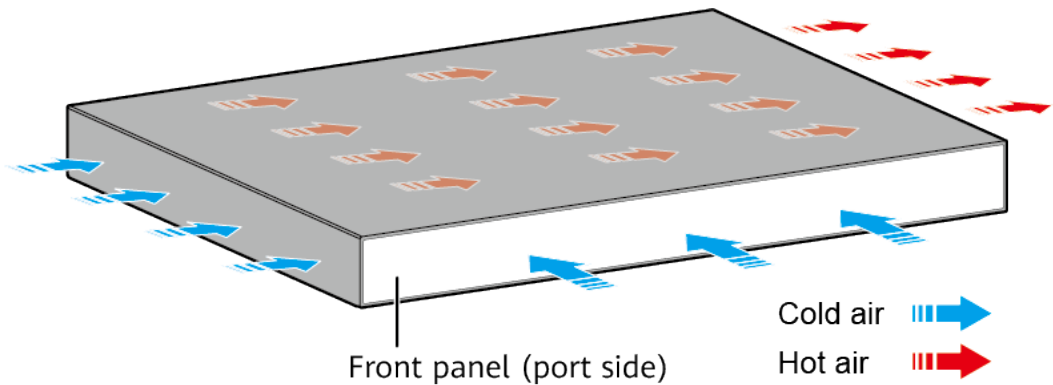
The S5731S-S48S4X-A1 has the same types of indicators as the S5731S-S32ST4X-A1. For details, see the S5731S-S32ST4X-A1.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1383** Technical specifications of the S5731S-S48S4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.40 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.40 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90 mm x 550 mm x 355 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.49 kg (7.69 lb)
Weight with packaging [kg(lb)]	4.85 kg (10.69 lb)
Typical power consumption [W]	87.89 W
Typical heat dissipation [BTU/hour]	299.89 BTU/hour
Maximum power consumption [W]	121.04 W
Maximum heat dissipation [BTU/hour]	413.00 BTU/hour
Static power consumption [W]	47.28 W
MTBF [years]	31.39 years
MTTR [hours]	2 hours



Item	Specification
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	41.42 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.74 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	- AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	- AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	3 A
Memory	2 GB

Item	Specification
Flash memory	The physical space is 1 GB. You can run the display version command to view the actual available space.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	±6 kV in differential mode; ±6 kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.26.16 S5731S-S48S4X-A1 (98011802-001)

### Overview

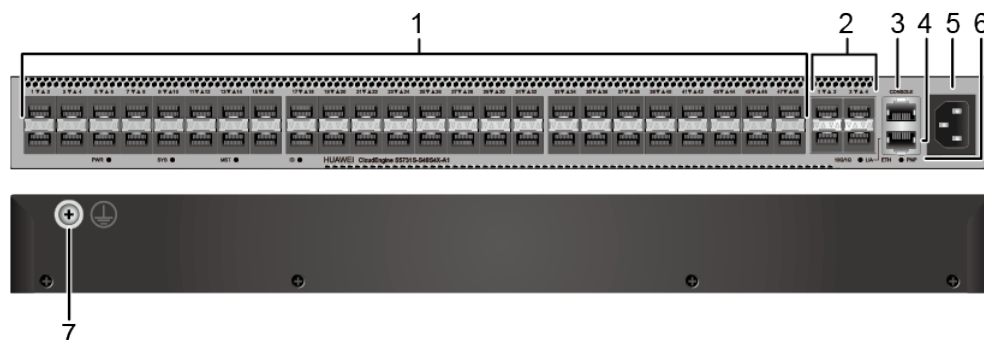
**Table 4-1384** Basic information about the S5731S-S48S4X-A1

Item	Details
Description	S5731S-S48S4X-A1 (48*GE SFP ports, 4*10GE SFP+ ports, AC power, front access)
Part Number	98011802-001
Model	S5731S-S48S4X-A1

Item	Details
First supported version	V200R021C10SPC600

## Components

Figure 4-542 S5731S-S48S4X-A1 appearance



1	Forty-eight 100/1000BASE-X ports <b>NOTE</b> In V200R023C00 and later versions, ports numbered from GE5 to GE48 can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.	2	Four 10GE SFP+ ports
3	One console port	4	One ETH management port
5	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	-	-

## Ports

**Table 4-1385** Ports on the S5731S-S48S4X-A1

Port	Connector Type	Description	Available Components
100/1000BASE-X port	SFP	<p>A 100/1000BASE-X port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s.</p> <p>In V200R023C00 and later versions, ports numbered from GE5 to GE48 can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"> <li>• <b>FE SFP/eSFP optical modules</b></li> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</b></li> </ul>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

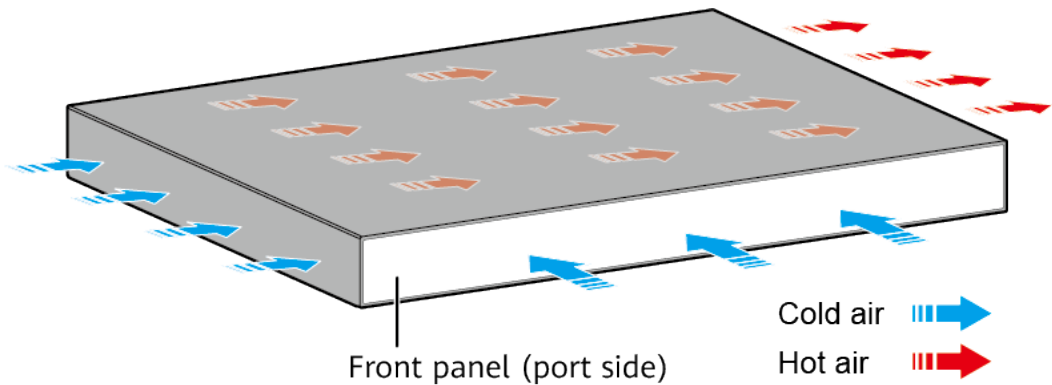
The S5731S-S48S4X-A1 has the same types of indicators as the S5731S-S32ST4X-A1. For details, see the S5731S-S32ST4X-A1.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1386** Technical specifications of the S5731S-S48S4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90 mm x 550 mm x 355 mm (3.54 in. x 21.65 in. x 13.98 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.49 kg (7.69 lb)
Weight with packaging [kg(lb)]	4.85 kg (10.69 lb)
Typical power consumption [W]	87.89 W
Typical heat dissipation [BTU/hour]	299.89 BTU/hour
Maximum power consumption [W]	121.04 W
Maximum heat dissipation [BTU/hour]	413.00 BTU/hour
Static power consumption [W]	47.28 W
MTBF [years]	31.39 years
MTTR [hours]	2 hours
Availability	> 0.99999



Item	Specification
Noise at normal temperature (acoustic power) [dB(A)]	41.42 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.74 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.44 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>

Item	Specification
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	- AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	- AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	3 A
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	Differential mode: ±6 kV; common mode: ±6 kV
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.27 S5731-H

### 4.27.1 S5731-H24T4XC (02352QPP/ 02352QPP-001/02352QPP-005)

#### Version Mapping

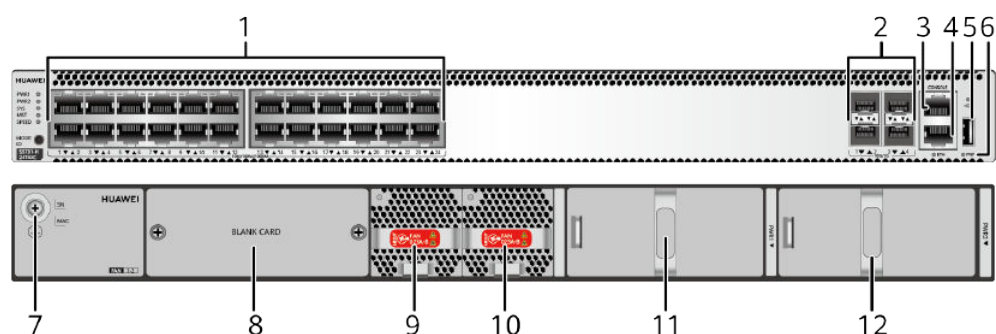
**Table 4-1387** lists the mapping between the S5731-H24T4XC chassis and software versions.

**Table 4-1387** Version mapping

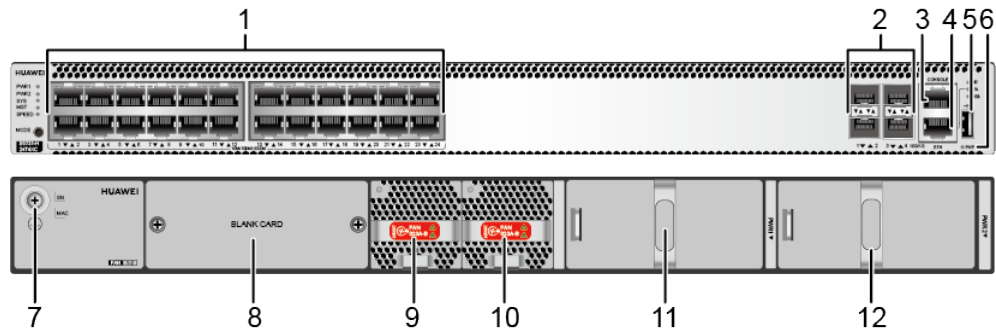
Series	Model	Software Version
S5731-H	S5731-H24T4XC	02352QPP: V200R013C02 and later versions 02352QPP-001: V200R020C10 and later versions 02352QPP-005: V200R021C10SPC600 and later versions (If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch. If V200R021C00SPC100 is used, install V200R021SPH013 or a later patch.)

#### Appearance and Structure

**Figure 4-543** S5731-H24T4XC (02352QPP) appearance



**Figure 4-544** S5731-H24T4XC (02352QPP-001/02352QPP-005) appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Rear card slot</p> <p><b>NOTE</b> Applicable card:</p> <ul style="list-style-type: none"> <li>• <a href="#">ES5D21X08T00</a></li> <li>• <a href="#">ES5D21Q02Q00</a></li> <li>• <a href="#">S7X08000 (02312URW)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">S7X08000 (02312URW-002)</a> (applicable in V200R021C10SPC600 and later versions)</li> <li>• <a href="#">S7Q02001 (02313UBW)</a> (applicable in V200R021C01 and later versions)</li> <li>• <a href="#">S7Q02001 (02313UBW-002)</a> (applicable in V200R021C10SPC600 and later versions)</li> </ul>
9	<p>Fan module slot 1</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	10	<p>Fan module slot 2</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>
11	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>	12	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1388](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1388** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1389](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1389** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1390](#).

**Table 4-1390** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1391](#) describes the attributes of an ETH management port.

**Table 4-1391** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

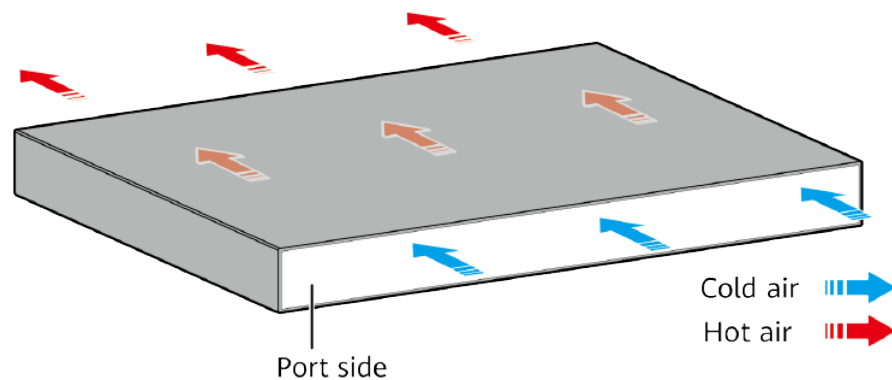
The S5731-H24T4XC has similar indicators to those on the S5731-H48P4XC except that the S5731-H24T4XC does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation

The S5731-H24T4XC uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1392](#) lists technical specifications of the S5731-H24T4XC.

**Table 4-1392** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	57.73 years
Mean time to repair (MTTR)	2 hours



Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)</li> </ul>
Weight (with packaging)	8.4 kg (18.52 lb)
Stack ports	10GE SFP+ ports on the front panel, or ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	114 W (without card)
Typical power consumption (30% of traffic load, tested according to ATIS standard)	88 W (without card)

Item	Description
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02352QPP 02352QPP-001 02352QPP-005

## 4.27.2 S5731-H24P4XC (02352QPV/ 02352QPV-001/02352QPV-003)

### Version Mapping

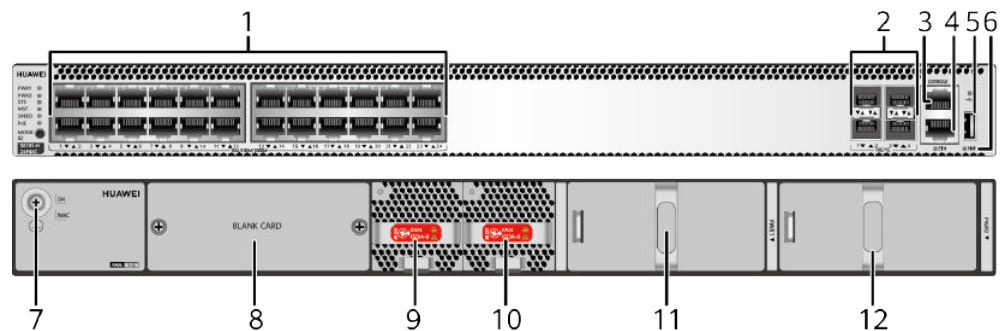
[Table 4-1393](#) lists the mapping between the S5731-H24P4XC chassis and software versions.

**Table 4-1393** Version mapping

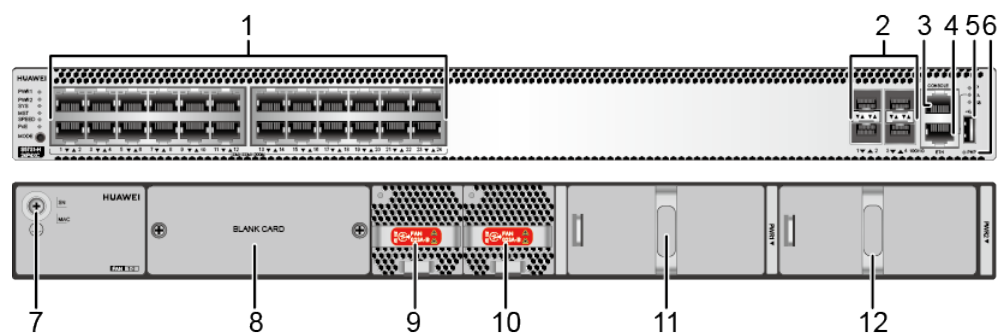
Series	Model	Software Version
S5731-H	S5731-H24P4XC	02352QPV: V200R013C02 and later versions 02352QPV-001: V200R020C10 and later versions 02352QPV-003: V200R021C10SPC600 and later versions (If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch. If V200R021C00SPC100 is used, install V200R021SPH013 or a later patch.)

## Appearance and Structure

**Figure 4-545** S5731-H24P4XC (02352QPV) appearance



**Figure 4-546** S5731-H24P4XC (02352QPV-001/02352QPV-003) appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	8	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Applicable card:</p> <ul style="list-style-type: none"> <li>• <b>E55D21X08T00</b></li> <li>• <b>E55D21Q02Q00</b></li> <li>• <b>S7X08000 (02312URW)</b> (applicable in V200R019C10 and later versions)</li> <li>• <b>S7X08000 (02312URW-002)</b> (applicable in V200R021C10SPC600 and later versions)</li> <li>• <b>S7Q02001 (02313UBW)</b> (applicable in V200R021C01 and later versions)</li> <li>• <b>S7Q02001 (02313UBW-002)</b> (applicable in V200R021C10SPC600 and later versions)</li> </ul>

9	<p>Fan module slot 1</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	1 0	<p>Fan module slot 2</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>
1 1	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a> (applicable in V200R021C10 and later versions)</li> </ul>	1 2	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a> (applicable in V200R021C10 and later versions)</li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1394](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1394** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1395](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1395** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1396](#).

**Table 4-1396** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1397](#) describes the attributes of an ETH management port.

**Table 4-1397** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5731-H24P4XC has the same types of indicators as the S5731-H48P4XC. For details, see [Indicator Description](#).

## Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1398** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	760 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>
1000 W AC (110 V)	–	665 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 22</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	Versions earlier than V200R021C10: 1330 W V200R021C10 and later versions: 1520 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>
600 W AC (220 V)	–	380 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
600 W AC (110 V)	–	95 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 6</li> <li>802.3at (30 W per port): 3</li> </ul>
600 W AC (220 V)	600 W AC (220 V)	950 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>
600 W AC (110 V)	600 W AC (110 V)	380 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1330 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>

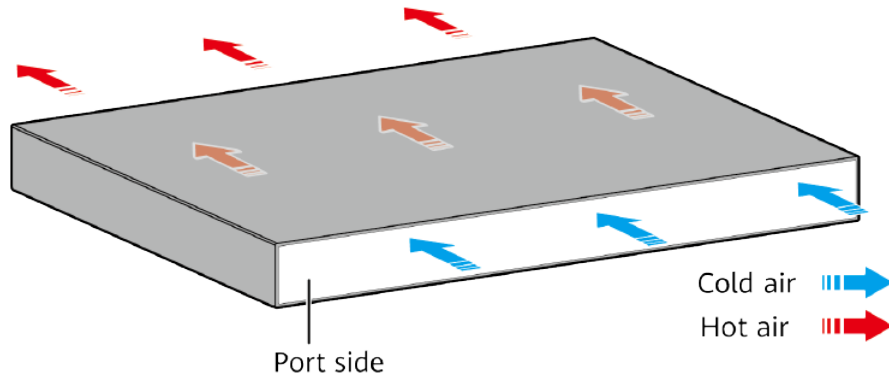


**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

## Heat Dissipation

The S5731-H24P4XC uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1399** lists technical specifications of the S5731-H24P4XC.

**Table 4-1399** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	57.21 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV

Item	Description
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)</li> </ul>
Weight (with packaging)	8.6 kg (18.96 lb)
Stack ports	10GE SFP+ ports on the front panel, or ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 121 W (without card)</li> <li>100% PoE loads: 977 W (PoE: 720 W, without card)</li> </ul>
Typical power consumption (30% of traffic load, tested according to ATIS standard)	95 W (without card)

Item	Description
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 62.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02352QPV 02352QPV-001 02352QPV-003

### 4.27.3 S5731-H48T4XC (02352QPT/02352QPT-003/02352QPT-007)

#### Version Mapping

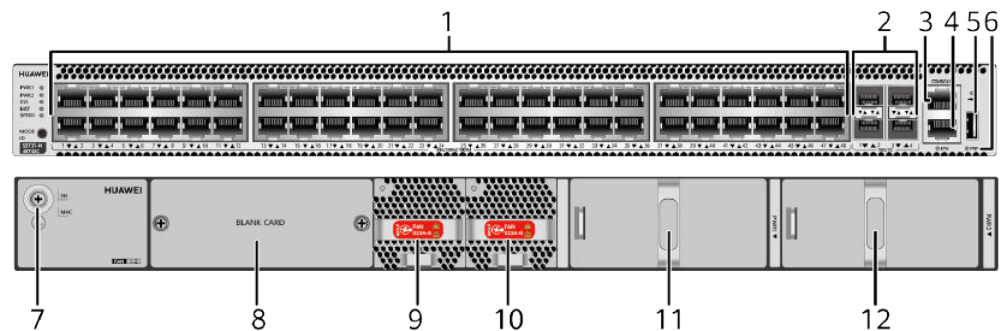
**Table 4-1400** lists the mapping between the S5731-H48T4XC chassis and software versions.

**Table 4-1400** Version mapping

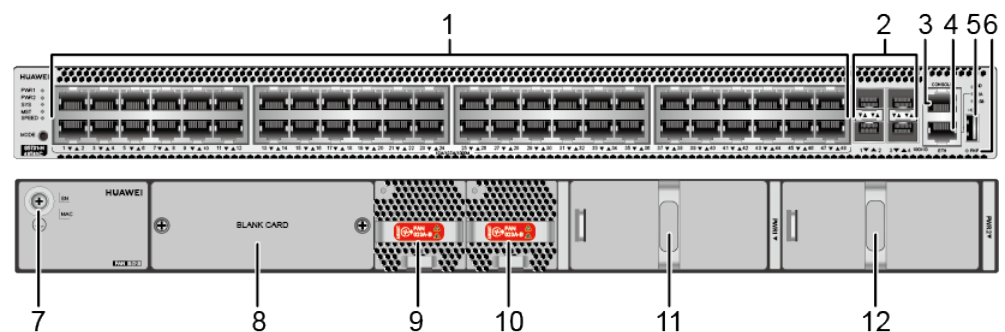
Series	Model	Software Version
S5731-H	S5731-H48T4XC	02352QPT: V200R013C02 and later versions 02352QPT-003: V200R020C10 and later versions 02352QPT-007: V200R021C10SPC600 and later versions (If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch. If V200R021C00SPC100 is used, install V200R021SPH013 or a later patch.)

## Appearance and Structure

**Figure 4-547** S5731-H48T4XC (02352QPT) appearance



**Figure 4-548** S5731-H48T4XC (02352QPT-003/02352QPT-007) appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	8	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Applicable card:</p> <ul style="list-style-type: none"> <li>• <b>E55D21X08T00</b></li> <li>• <b>E55D21Q02Q00</b></li> <li>• <b>S7X08000 (02312URW)</b> (applicable in V200R019C10 and later versions)</li> <li>• <b>S7X08000 (02312URW-002)</b> (applicable in V200R021C10SPC600 and later versions)</li> <li>• <b>S7Q02001 (02313UBW)</b> (applicable in V200R021C01 and later versions)</li> <li>• <b>S7Q02001 (02313UBW-002)</b> (applicable in V200R021C10SPC600 and later versions)</li> </ul>

9	Fan module slot 1 <b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a>	10	Fan module slot 2 <b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a>
11	Power module slot 1 <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>	12	Power module slot 2 <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1401](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1401** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1402](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1402** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1403](#).

**Table 4-1403** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1404](#) describes the attributes of an ETH management port.

**Table 4-1404** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5731-H48T4XC has similar indicators to those on the S5731-H48P4XC except that the S5731-H48T4XC does not have a PoE mode indicator. For details, see [Indicator Description](#).

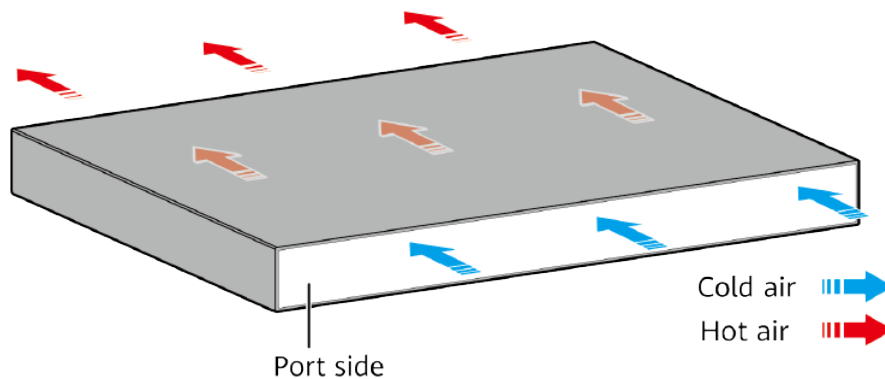
## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation

The S5731-H48T4XC uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.





**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1405** lists technical specifications of the S5731-H48T4XC.

**Table 4-1405** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	55.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)</li> </ul>

Item	Description
Weight (with packaging)	8.55 kg (18.85 lb)
Stack ports	10GE SFP+ ports on the front panel, or ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>● AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>● High-Voltage DC input: 240 V DC</li> <li>● DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>● High-Voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	124 W (without card)
Typical power consumption (30% of traffic load, tested according to ATIS standard)	101 W (without card)
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02352QPT 02352QPT-003 02352QPT-007

#### 4.27.4 S5731-H48P4XC (02352SVD/ 02352SVD-001/02352SVD-003)

##### Version Mapping

**Table 4-1406** lists the mapping between the S5731-H48P4XC chassis and software versions.

**Table 4-1406** Version mapping

Series	Model	Software Version
S5731-H	S5731-H48P4XC	02352SVD: V200R013C02 and later versions 02352SVD-001: V200R020C10 and later versions 02352SVD-003: V200R021C10SPC600 and later versions (If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch. If V200R021C00SPC100 is used, install V200R021SPH013 or a later patch.)

## Appearance and Structure

Figure 4-549 S5731-H48P4XC (02352SVD) appearance

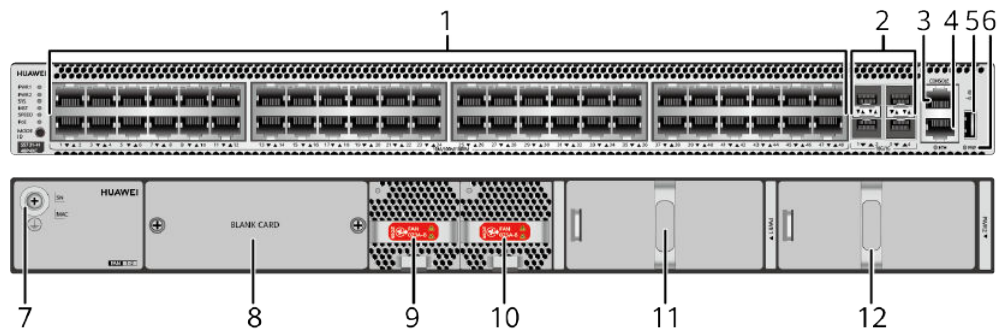
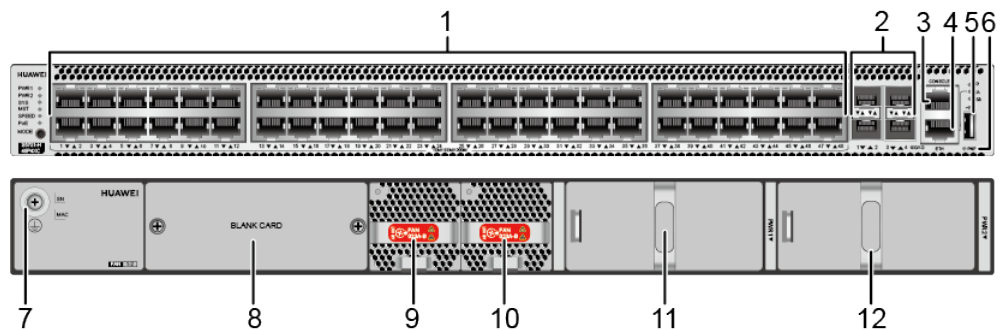


Figure 4-550 S5731-H48P4XC (02352SVD-001/02352SVD-003) appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One console port	4	One ETH management port

5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Applicable card:</p> <ul style="list-style-type: none"> <li>• <a href="#">ES5D21X08T00</a></li> <li>• <a href="#">ES5D21Q02Q00</a></li> <li>• <a href="#">S7X08000 (02312URW)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">S7X08000 (02312URW-002)</a> (applicable in V200R021C10SPC600 and later versions)</li> <li>• <a href="#">S7Q02001 (02313UBW)</a> (applicable in V200R021C01 and later versions)</li> <li>• <a href="#">S7Q02001 (02313UBW-002)</a> (applicable in V200R021C10SPC600 and later versions)</li> </ul>
9	<p>Fan module slot 1</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	10	<p>Fan module slot 2</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>

1 1	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a> (applicable in V200R021C10 and later versions)</li> </ul>	1 2	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a> (applicable in V200R021C10 and later versions)</li> </ul>
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1407](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1407** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1408](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1408** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1409](#).

**Table 4-1409** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1410](#) describes the attributes of an ETH management port.

**Table 4-1410** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

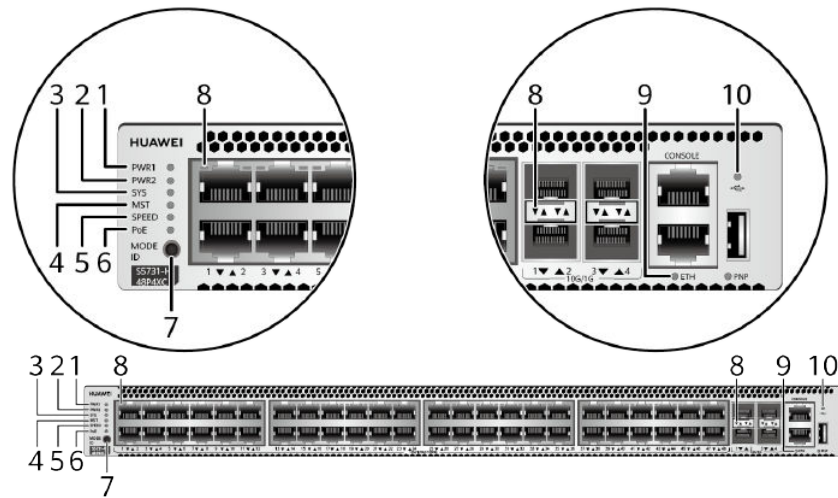
#### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

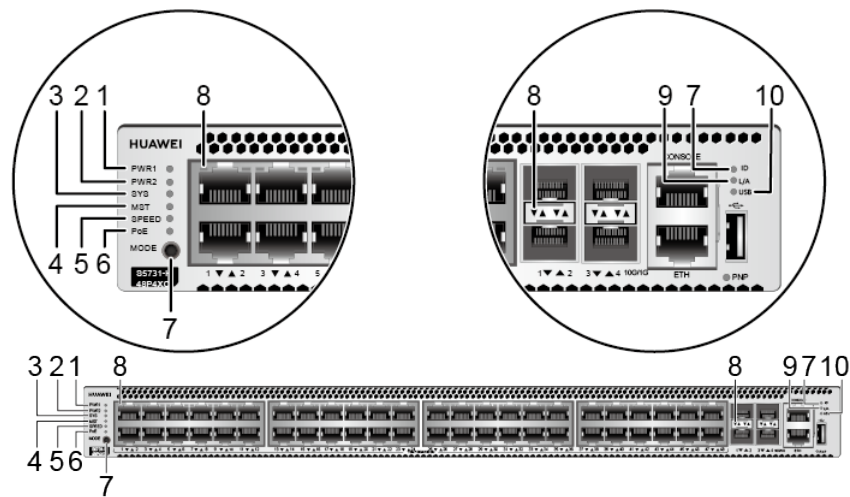
- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.



**Figure 4-551** Indicators on the S5731-H48P4XC (02352SVD)



**Figure 4-552** Indicators on the S5731-H48P4XC (02352SVD-001/02352SVD-003)



**Table 4-1411** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.

No.	Indicator	Name	Color	Status	Description
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.

No.	Indicator	Name	Color	Status	Description
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p>
	ID	ID indicator	-	Off	The ID indicator is not used (default state).
		<b>NOTE</b> The mode switch button has an ID indicator.	Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.

No.	Indicator	Name	Color	Status	Description
8	-	Electrical service port indicator (one indicator for each port)	The indicator in the upper left corner of a port indicates the indicator of a port at the top, and the indicator in the upper right corner indicates the indicator of a port at the bottom.		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1412</a> and <a href="#">Table 4-1413</a> .
		Optical service port indicator (two indicators for each port)	Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		
9	ETH	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.

No.	Indicator	Name	Color	Status	Description
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1412** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	Green	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
		Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
		Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.

**Table 4-1413** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s. 1000M port: The port is operating at 1000 Mbit/s.

## Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1414** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	-	760 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 25</li> </ul>
1000 W AC (110 V)	-	665 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 43</li> <li>802.3at (30 W per port): 22</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	Versions earlier than V200R021C10: 1330 W V200R021C10 and later versions: 1520 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>



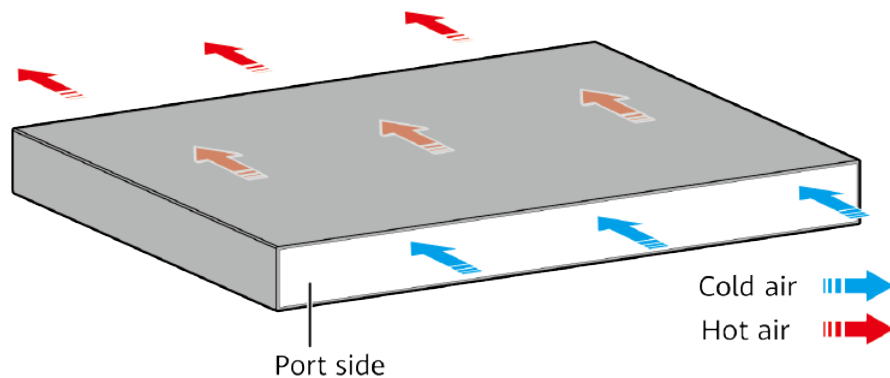
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
600 W AC (220 V)	-	380 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
600 W AC (110 V)	-	95 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 6</li> <li>802.3at (30 W per port): 3</li> </ul>
600 W AC (220 V)	600 W AC (220 V)	950 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 31</li> </ul>
600 W AC (110 V)	600 W AC (110 V)	380 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 12</li> </ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1330 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 44</li> </ul>

**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

## Heat Dissipation

The S5731-H48P4XC uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1415](#) lists technical specifications of the S5731-H48P4XC.

**Table 4-1415** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	54.96 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)</li> </ul>
Weight (with packaging)	8.8 kg (19.40 lb)
Stack ports	10GE SFP+ ports on the front panel, or ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Supported

Item	Description
Rated voltage range	<ul style="list-style-type: none"> <li>● AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>● High-Voltage DC input: 240 V DC</li> <li>● DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>● High-Voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>● Not providing the PoE function: 132 W (without card)</li> <li>● 100% PoE loads: 1750 W (PoE: 1440 W, without card)</li> </ul>
Typical power consumption (30% of traffic load, tested according to ATIS standard)	108 W (without card)
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b>                      When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                      The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 62.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>● EMC certification</li> <li>● Safety certification</li> <li>● Manufacturing certification</li> </ul>

Item	Description
Part number	02352SVD 02352SVD-001 02352SVD-003

## 4.27.5 S5731-H48T4XC-B (02353VAD/ 02353VAD-003/02353VAD-005)

### Version Mapping

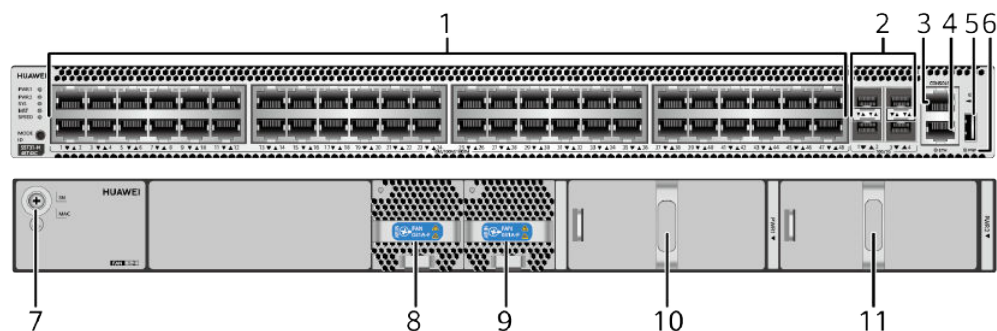
**Table 4-1416** lists the mapping between the S5731-H48T4XC-B chassis and software versions.

**Table 4-1416** Version mapping

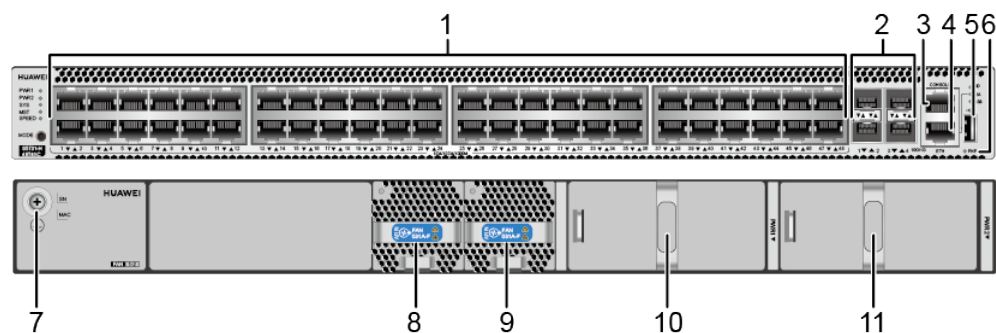
Series	Model	Software Version
S5731-H	S5731-H48T4XC-B	02353VAD: V200R020C00 and later versions 02353VAD-003: V200R020C10 and later versions 02353VAD-005: V200R021C10SPC600 and later versions (If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch. If V200R021C00SPC100 is used, install V200R021SPH013 or a later patch.)

### Appearance and Structure

**Figure 4-553** S5731-H48T4XC-B (02353VAD) appearance



**Figure 4-554** S5731-H48T4XC-B (02353VAD-003/02353VAD-005) appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Fan module slot 1 <b>NOTE</b> Applicable fan module: <a href="#">7.6 FAN-031A-F (Fan box (F, FAN panel side intake))</a>
9	Fan module slot 2 <b>NOTE</b> Applicable fan module: <a href="#">7.6 FAN-031A-F (Fan box (F, FAN panel side intake))</a>	10	Power module slot 1 <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> </ul>
11	Power module slot 2 <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1417](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1417** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1418](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1418** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1419](#).

**Table 4-1419** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1420](#) describes the attributes of an ETH management port.

**Table 4-1420** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5731-H48T4XC-B has similar indicators to those on the S5731-H48P4XC except that the S5731-H48T4XC-B does not have a PoE mode indicator. For details, see [Indicator Description](#).

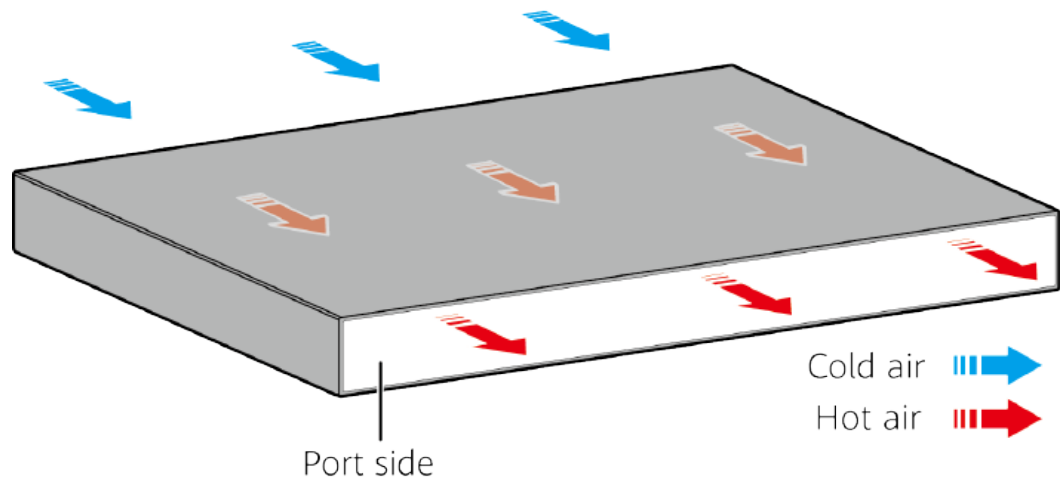
## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

## Heat Dissipation

The S5731-H48T4XC-B uses pluggable fan modules for forced air cooling. Air flows in from the rear panel and exhausts from the front side.





**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1421** lists technical specifications of the S5731-H48T4XC-B.

**Table 4-1421** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	55.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>• Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)</li> </ul>
Weight (with packaging)	8.55 kg (18.85 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>• DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>• AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>• DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	130 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	82.89 W
Operating temperature	<p>-5°C to +40°C (23°F to 104°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b>                      When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                      The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 59.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02353VAD 02353VAD-003 02353VAD-005

## 4.27.6 S5731-H24HB4XZ (02354QXD)

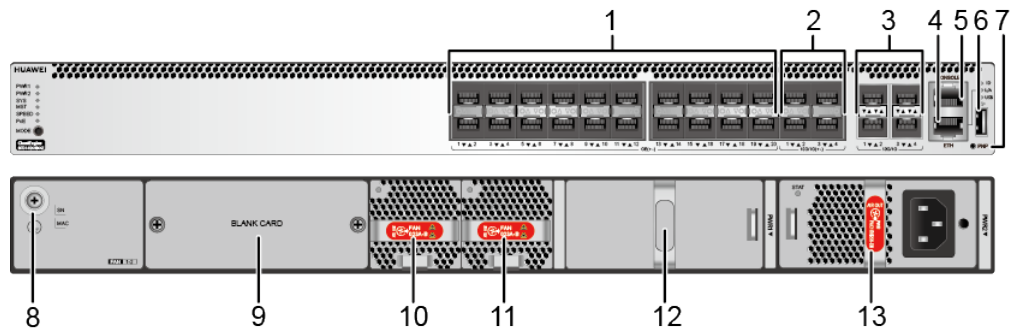
### Overview

**Table 4-1422** Basic information about the S5731-H24HB4XZ

Item	Details
Description	S5731-H24HB4XZ(20*Hybrid GE SFP ports, 4*Hybrid 10GE SFP+ ports, 4*10GE SFP+ ports, 1*expansion slot, PoE++, without power module)
Part Number	02354QXD
Model	S5731-H24HB4XZ
First supported version	V200R021C10SPC500

## Components

Figure 4-555 S5731-H24HB4XZ appearance



1	<p>Twenty 100/1000BASE-X hybrid optical-electrical ports (supporting PoE++)</p> <p><b>NOTE</b> In V200R023C00 and later versions, 100/1000BASE-X hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.</p>	2	<p>Four 10GE SFP+ hybrid optical-electrical ports (supporting PoE++)</p> <p><b>NOTE</b> In V200R023C00 and later versions, 10GE SFP+ hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.</p>
3	Four 10GE SFP+ optical ports	4	One ETH management port
5	One console port	6	One USB port
7	<p>One PNP button</p> <p><b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	8	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>. Two OT grounding holes are provided on the side of the switch. If two OT terminals are required for grounding, you can purchase the two OT terminals separately.</p>

9	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Applicable card:</p> <ul style="list-style-type: none"> <li>• <a href="#">ES5D21X08T00</a></li> <li>• <a href="#">ES5D21Q02Q00</a></li> <li>• <a href="#">S7X08000 (02312URW)</a></li> <li>• <a href="#">S7X08000 (02312URW-002)</a> (applicable in V200R021C10SPC600 and later versions)</li> <li>• <a href="#">S7Q02001 (02313UBW)</a></li> <li>• <a href="#">S7Q02001 (02313UBW-002)</a> (applicable in V200R021C10SPC600 and later versions)</li> </ul> <p>If the rate of an port is set to 2.5 Gbit/s, the rear card cannot be used.</p>	1 0	<p>Fan module slot 1</p> <p><b>NOTE</b></p> <p>Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>
1 1	<p>Fan module slot 2</p> <p><b>NOTE</b></p> <p>Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	1 2	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a></li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a></li> </ul>

1	Power module slot 2	-	-
3	<b>NOTE</b> Applicable power modules: <ul style="list-style-type: none"><li>• 5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</li><li>• 5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</li><li>• 5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</li><li>• 5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</li><li>• 5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</li></ul>		

## Ports

**Table 4-1423** Ports on the S5731-H24HB4XZ

Port	Connector Type	Description	Available Components
100/1000BASE-X hybrid optical-electrical port	SFP	<p>A 100/1000BASE-X hybrid optical-electrical port can send and receive data at 100 Mbit/s or 1000 Mbit/s. It can provide PoE power through hybrid cable.</p> <p>In V200R023C00 and later versions, 100/1000BASE-X hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"> <li>• <b>FE SFP/eSFP optical modules</b></li> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>GE SFP Hybrid Modules</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</b></li> <li>• <b>2.5GE eSFP Hybrid Modules (supported in V200R023C00 and later versions)</b></li> <li>• <b>Hybrid cable 2.0</b></li> </ul>

Port	Connector Type	Description	Available Components
10GE SFP+ hybrid optical-electrical port	SFP+	<p>A 10GE SFP+ hybrid optical-electrical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s, 2.5 Gbit/s, or 10 Gbit/s. It can provide PoE power through hybrid cable.</p> <p>In V200R023C00 and later versions, 10GE SFP+ hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"> <li>● <a href="#">GE eSFP optical modules</a></li> <li>● <a href="#">GE-CWDM eSFP optical modules</a></li> <li>● <a href="#">GE-DWDM eSFP optical modules</a></li> <li>● <a href="#">GE SFP copper module</a></li> <li>● <a href="#">10GE SFP+ optical modules (OSXD22N00 not supported)</a></li> <li>● <a href="#">10GE-CWDM SFP+ optical modules</a></li> <li>● <a href="#">10GE-DWDM SFP+ optical modules</a></li> <li>● <a href="#">1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</a></li> <li>● <a href="#">3 m and 10 m SFP+ AOC cables</a></li> <li>● <a href="#">GE SFP Hybrid Modules</a></li> <li>● <a href="#">10GE SFP+ Hybrid Modules</a></li> <li>● <a href="#">2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</a></li> <li>● <a href="#">2.5GE eSFP Hybrid Modules</a></li> </ul>



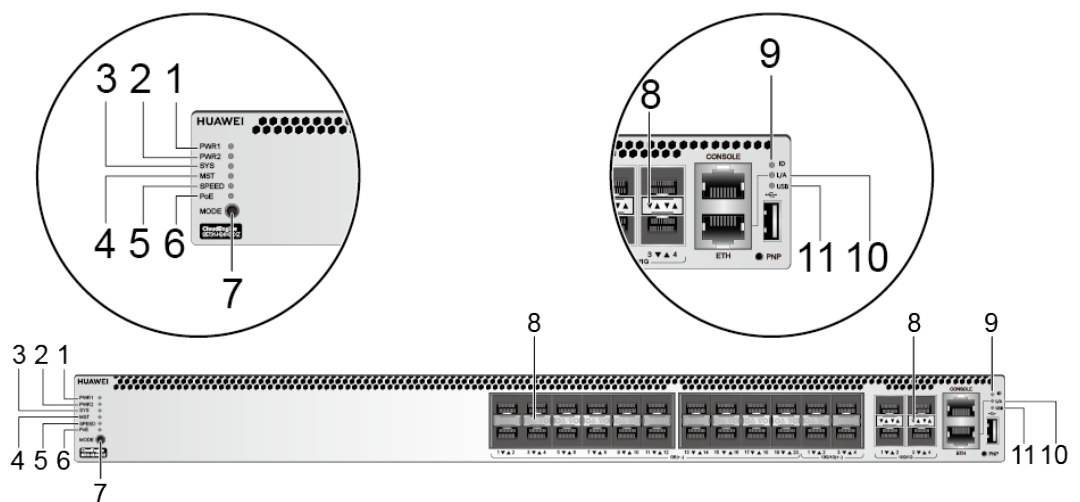
Port	Connector Type	Description	Available Components
			<p>(supported in V200R023C00 and later versions)</p> <ul style="list-style-type: none"> <li>Hybrid cable 2.0</li> </ul>
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>GE eSFP optical modules</li> <li>GE-CWDM eSFP optical modules</li> <li>GE-DWDM eSFP optical modules</li> <li>GE SFP copper module</li> <li>10GE SFP+ optical modules (OSXD22N00 not supported)</li> <li>10GE-CWDM SFP+ optical modules</li> <li>10GE-DWDM SFP+ optical modules</li> <li>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</li> <li>3 m and 10 m SFP+ AOC cables</li> <li>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</li> </ul>

Port	Connector Type	Description	Available Components
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

Figure 4-556 Indicators on the switch



**Table 4-1424** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.

No.	Indicator	Name	Color	Status	Description
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p> <p><b>NOTE</b> Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> <li>If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows: <ul style="list-style-type: none"> <li>If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.</li> <li>If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.</li> </ul> </li> <li>If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.</li> </ul>

No.	Indicator	Name	Color	Status	Description
8	-	Hybrid optical-electrical port indicator	Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1425</a> and <a href="#">Table 4-1426</a> .
		10GE optical port indicator	Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		
9	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
10	L/A	ETH port indicator	-	Off	The ETH port is not connected.



No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
11	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1425** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	100M/1000M port: The port is operating at 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.

**Table 4-1426** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode (LINK indicator)	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
Default mode (ACT indicator)	-	Off	The port is not connected or has been shut down, or no data is transmitted or received.
	Yellow	Blinking	The port is sending or receiving data.
Speed mode (LINK indicator)	-	Off	The port is not connected or has been shut down.
	Green	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s.

## Power Supply System

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1427** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	-	818 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 13</li> <li>• 802.3bt (90 W per port): 9</li> </ul>

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (110 V)	–	723 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 12</li> <li>● 802.3bt (90 W per port): 8</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1768 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 24</li> <li>● 802.3bt (90 W per port): 19</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1578 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 24</li> <li>● 802.3bt (90 W per port): 17</li> </ul>
600 W AC (220 V)	–	438 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 14</li> <li>● 802.3bt (60 W per port): 7</li> <li>● 802.3bt (90 W per port): 4</li> </ul>
600 W AC (110 V)	–	153 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 9</li> <li>● 802.3at (30 W per port): 5</li> <li>● 802.3bt (60 W per port): 2</li> <li>● 802.3bt (90 W per port): 1</li> </ul>

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
600 W AC (220 V)	600 W AC (220 V)	1008 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 16</li> <li>802.3bt (90 W per port): 11</li> </ul>
600 W AC (110 V)	600 W AC (110 V)	438 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 14</li> <li>802.3bt (60 W per port): 7</li> <li>802.3bt (90 W per port): 4</li> </ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1388 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 23</li> <li>802.3bt (90 W per port): 15</li> </ul>

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

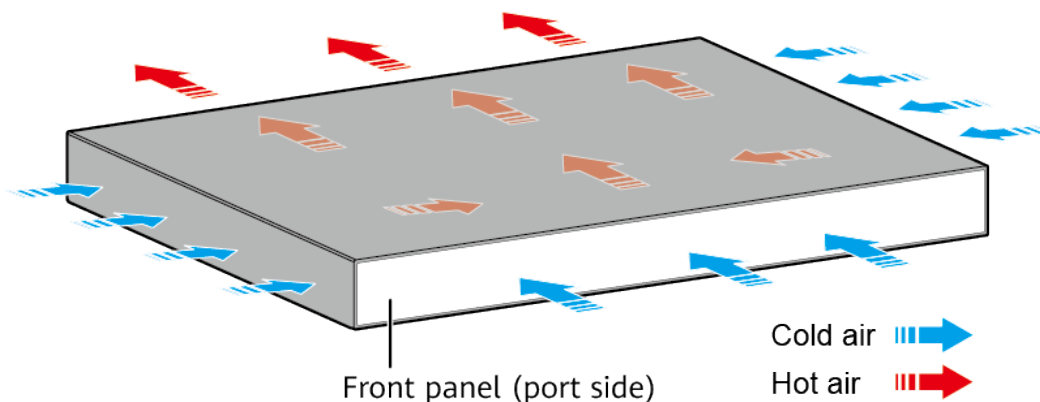
When a hybrid optical-electrical port is used for PoE power supply, the power supply capability and distance vary according to hybrid cables with different cable diameters. You can use the [Central Switch-to-RU Cable Length Calculation Tool](#) to calculate the power supply distance of the hybrid cable in different scenarios.

 **NOTE**

- The hybrid switch uses hybrid cables to connect to and supply power to APs or remote units of specific models. (For details about the AP models to which hybrid cables can supply power, see the WLAN AP product documentation. The remote unit that supports hybrid cables is S5731-L4P2HW-RUA, S5731S-L4P2HW-RUA, S5731-L4P2HT-RUA, S5731S-L4P2HT-RUA, S5731-L8P2HT-RUA, and S5731S-L8P2HT-RUA.)
- The hybrid switch cannot be connected to devices other than remote units or APs using hybrid cables.

## Heat Dissipation System

The switch uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1428** Technical specifications of the S5731-H24HB4XZ

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	5.7 kg (12.57 lb)
Weight with packaging [kg(lb)]	7.5 kg (16.53 lb)
Typical power consumption [W]	87 W
Typical heat dissipation [BTU/hour]	296.85 BTU/hour

Item	Specification
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>• Without PoE: 127 W (without cards)</li> <li>• Full PoE load: 1927 W (PoE: 1768 W, without cards)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>• Without PoE: 433.34 (without cards)</li> <li>• Full PoE load: 6575.12 (without cards)</li> </ul>
Static power consumption [W]	66 W
MTBF [years]	53.82 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Dual-AC 600 W, 70% load: 57.77 dBA Dual-AC 1000 W, 70% load: 63.78 dBA Dual-DC 1000 W, 70% load: 62.38 dBA Dual-AC 600 W, 100% load: 63.78 dBA Dual-AC 1000 W, 100% load: 68.07 dBA Dual-DC 1000 W, 100% load: 66.26 dBA
Number of card slots	1
Number of power slots	2
Number of fans modules	2
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.51 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"><li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li><li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li><li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li></ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	–40°C to +70°C (–40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Storage altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"><li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li><li>• High-voltage DC input: 240 V DC</li><li>• DC input: –48 V DC to –60 V DC</li></ul>



Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 290 V AC; 45–65 Hz</li> <li>● High-voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum input current [A]	The current specifications are related to the pluggable power module. For details, see Pluggable Power Modules.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	<ul style="list-style-type: none"> <li>● Configured with AC power modules: ±6 kV in differential mode and ±6 kV in common mode</li> <li>● Configured with DC power modules: ±2 kV in differential mode and ±4 kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Pluggable
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from left, front, and right and air exhaust from rear
PoE	Supported

Item	Specification
Certification	EMC certification (The EMC radiated emission complies with standards requirements, although it may vary according to installation of optical modules or copper modules.) Safety certification Manufacturing certification

## 4.27.7 S5731-H24HB4XZ (02354QXD-001)

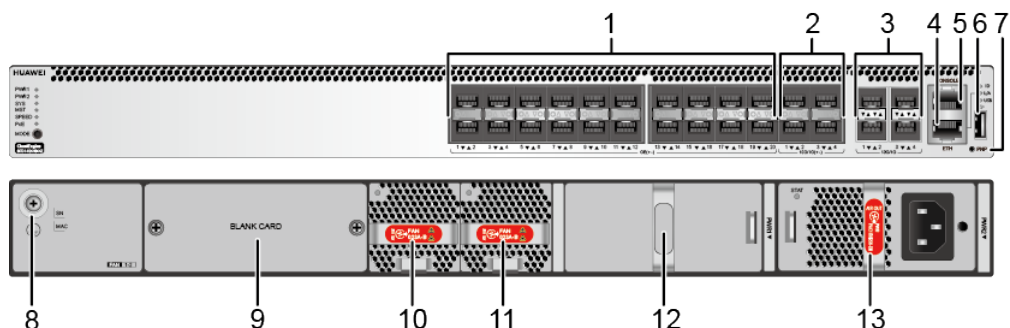
### Overview

**Table 4-1429** Basic information about the S5731-H24HB4XZ

Item	Details
Description	S5731-H24HB4XZ(20*Hybrid GE SFP ports, 4*Hybrid 10GE SFP+ ports, 4*10GE SFP+ ports, 1*expansion slot, PoE++, without power module)
Part Number	02354QXD-001
Model	S5731-H24HB4XZ
First supported version	V200R021C10SPC600

### Components

**Figure 4-557** S5731-H24HB4XZ appearance



1	<p>Twenty 100/1000BASE-X hybrid optical-electrical ports (supporting PoE++)</p> <p><b>NOTE</b></p> <p>In V200R023C00 and later versions, 100/1000BASE-X hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.</p>	2	<p>Four 10GE SFP+ hybrid optical-electrical ports (supporting PoE++)</p> <p><b>NOTE</b></p> <p>In V200R023C00 and later versions, 10GE SFP+ hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.</p>
3	Four 10GE SFP+ optical ports	4	One ETH management port
5	One console port	6	One USB port
7	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	8	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p> <p>Two OT grounding holes are provided on the side of the switch. If two OT terminals are required for grounding, you can purchase the two OT terminals separately.</p>
9	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Applicable card:</p> <ul style="list-style-type: none"> <li>• <b>ES5D21X08T00</b></li> <li>• <b>ES5D21Q02Q00</b></li> <li>• <b>S7X08000 (02312URW)</b></li> <li>• <b>S7X08000 (02312URW-002)</b> (applicable in V200R021C10SPC600 and later versions)</li> <li>• <b>S7Q02001 (02313UBW)</b></li> <li>• <b>S7Q02001 (02313UBW-002)</b> (applicable in V200R021C10SPC600 and later versions)</li> </ul> <p>If the rate of an port is set to 2.5 Gbit/s, the rear card cannot be used.</p>	10	<p>Fan module slot 1</p> <p><b>NOTE</b></p> <p>Applicable fan module: <b>7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</b></p>

<p>1 1</p>	<p>Fan module slot 2</p> <p><b>NOTE</b>                  Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	<p>1 2</p>	<p>Power module slot 1</p> <p><b>NOTE</b>                  Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a></li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a></li> </ul>
<p>1 3</p>	<p>Power module slot 2</p> <p><b>NOTE</b>                  Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a></li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a></li> </ul>	<p>-</p>	<p>-</p>

## Ports

**Table 4-1430** Ports on the S5731-H24HB4XZ

Port	Connector Type	Description	Available Components
100/1000BASE-X hybrid optical-electrical port	SFP	<p>A 100/1000BASE-X hybrid optical-electrical port can send and receive data at 100 Mbit/s or 1000 Mbit/s. It can provide PoE power through hybrid cable.</p> <p>In V200R023C00 and later versions, 100/1000BASE-X hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"> <li>• <b>FE SFP/eSFP optical modules</b></li> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>GE SFP Hybrid Modules</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</b></li> <li>• <b>2.5GE eSFP Hybrid Modules (supported in V200R023C00 and later versions)</b></li> <li>• <b>Hybrid cable 2.0</b></li> </ul>

Port	Connector Type	Description	Available Components
<p>10GE SFP+ hybrid optical-electrical port</p>	<p>SFP+</p>	<p>A 10GE SFP+ hybrid optical-electrical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s, 2.5 Gbit/s, or 10 Gbit/s. It can provide PoE power through hybrid cable.</p> <p>In V200R023C00 and later versions, 10GE SFP+ hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"> <li>● <a href="#">GE eSFP optical modules</a></li> <li>● <a href="#">GE-CWDM eSFP optical modules</a></li> <li>● <a href="#">GE-DWDM eSFP optical modules</a></li> <li>● <a href="#">GE SFP copper module</a></li> <li>● <a href="#">10GE SFP+ optical modules (OSXD22N00 not supported)</a></li> <li>● <a href="#">10GE-CWDM SFP+ optical modules</a></li> <li>● <a href="#">10GE-DWDM SFP+ optical modules</a></li> <li>● <a href="#">1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</a></li> <li>● <a href="#">3 m and 10 m SFP+ AOC cables</a></li> <li>● <a href="#">GE SFP Hybrid Modules</a></li> <li>● <a href="#">10GE SFP+ Hybrid Modules</a></li> <li>● <a href="#">2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</a></li> <li>● <a href="#">2.5GE eSFP Hybrid Modules</a></li> </ul>

Port	Connector Type	Description	Available Components
			<p>(supported in V200R023C00 and later versions)</p> <ul style="list-style-type: none"> <li>Hybrid cable 2.0</li> </ul>
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>GE eSFP optical modules</li> <li>GE-CWDM eSFP optical modules</li> <li>GE-DWDM eSFP optical modules</li> <li>GE SFP copper module</li> <li>10GE SFP+ optical modules (OSXD22N00 not supported)</li> <li>10GE-CWDM SFP+ optical modules</li> <li>10GE-DWDM SFP+ optical modules</li> <li>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</li> <li>3 m and 10 m SFP+ AOC cables</li> <li>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</li> </ul>

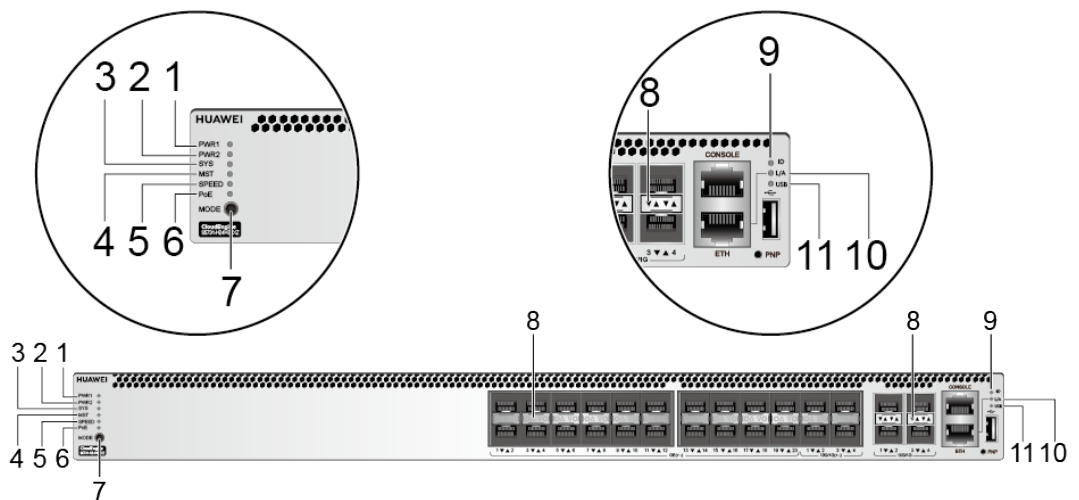
Port	Connector Type	Description	Available Components
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>



Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

Figure 4-558 Indicators on the switch



**Table 4-1431** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.

No.	Indicator	Name	Color	Status	Description
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p> <p><b>NOTE</b> Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> <li>If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows: <ul style="list-style-type: none"> <li>If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.</li> <li>If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.</li> </ul> </li> <li>If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.</li> </ul>

No.	Indicator	Name	Color	Status	Description
8	-	Hybrid optical-electrical port indicator	Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1432</a> and <a href="#">Table 4-1433</a> .
		10GE optical port indicator	Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		
9	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
10	L/A	ETH port indicator	-	Off	The ETH port is not connected.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
11	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1432** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	100M/1000M port: The port is operating at 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.



**Table 4-1433** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode (LINK indicator)	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
Default mode (ACT indicator)	-	Off	The port is not connected or has been shut down, or no data is transmitted or received.
	Yellow	Blinking	The port is sending or receiving data.
Speed mode (LINK indicator)	-	Off	The port is not connected or has been shut down.
	Green	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s.

## Power Supply System

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1434** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	-	818 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 13</li> <li>802.3bt (90 W per port): 9</li> </ul>

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (110 V)	–	723 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 24</li><li>• 802.3at (30 W per port): 24</li><li>• 802.3bt (60 W per port): 12</li><li>• 802.3bt (90 W per port): 8</li></ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1768 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 24</li><li>• 802.3at (30 W per port): 24</li><li>• 802.3bt (60 W per port): 24</li><li>• 802.3bt (90 W per port): 19</li></ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1578 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 24</li><li>• 802.3at (30 W per port): 24</li><li>• 802.3bt (60 W per port): 24</li><li>• 802.3bt (90 W per port): 17</li></ul>
600 W AC (220 V)	–	438 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 24</li><li>• 802.3at (30 W per port): 14</li><li>• 802.3bt (60 W per port): 7</li><li>• 802.3bt (90 W per port): 4</li></ul>
600 W AC (110 V)	–	153 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 9</li><li>• 802.3at (30 W per port): 5</li><li>• 802.3bt (60 W per port): 2</li><li>• 802.3bt (90 W per port): 1</li></ul>

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
600 W AC (220 V)	600 W AC (220 V)	1008 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 16</li> <li>• 802.3bt (90 W per port): 11</li> </ul>
600 W AC (110 V)	600 W AC (110 V)	438 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 14</li> <li>• 802.3bt (60 W per port): 7</li> <li>• 802.3bt (90 W per port): 4</li> </ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1388 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 23</li> <li>• 802.3bt (90 W per port): 15</li> </ul>

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

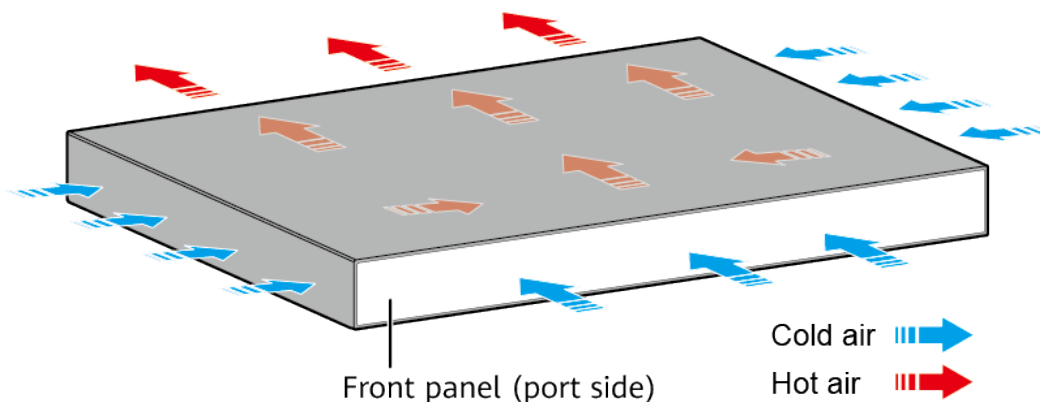
When a hybrid optical-electrical port is used for PoE power supply, the power supply capability and distance vary according to hybrid cables with different cable diameters. You can use the [Central Switch-to-RU Cable Length Calculation Tool](#) to calculate the power supply distance of the hybrid cable in different scenarios.

 **NOTE**

- The hybrid switch uses hybrid cables to connect to and supply power to APs or remote units of specific models. (For details about the AP models to which hybrid cables can supply power, see the WLAN AP product documentation. The remote unit that supports hybrid cables is S5731-L4P2HW-RUA, S5731S-L4P2HW-RUA, S5731-L4P2HT-RUA, S5731S-L4P2HT-RUA, S5731-L8P2HT-RUA, and S5731S-L8P2HT-RUA.)
- The hybrid switch cannot be connected to devices other than remote units or APs using hybrid cables.

## Heat Dissipation System

The switch uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1435** Technical specifications of the S5731-H24HB4XZ

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	5.7 kg (12.57 lb)
Weight with packaging [kg(lb)]	7.5 kg (16.53 lb)
Typical power consumption [W]	87 W
Typical heat dissipation [BTU/hour]	296.85 BTU/hour

Item	Specification
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 127 W (without cards)</li> <li>Full PoE load: 1927 W (PoE: 1768 W, without cards)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 433.34 (without cards)</li> <li>Full PoE load: 6575.12 (without cards)</li> </ul>
Static power consumption [W]	66 W
MTBF [years]	53.82 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Dual-AC 600 W, 70% load: 57.77 dBA Dual-AC 1000 W, 70% load: 63.78 dBA Dual-DC 1000 W, 70% load: 62.38 dBA Dual-AC 600 W, 100% load: 63.78 dBA Dual-AC 1000 W, 100% load: 68.07 dBA Dual-DC 1000 W, 100% load: 66.26 dBA
Number of card slots	1
Number of power slots	2
Number of fans modules	2
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.44 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	–40°C to +70°C (–40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Storage altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: –48 V DC to –60 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 290 V AC; 45–65 Hz</li> <li>● High-voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum input current [A]	The current specifications are related to the pluggable power module. For details, see Pluggable Power Modules.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	<ul style="list-style-type: none"> <li>● Configured with AC power modules: ±6 kV in differential mode and ±6 kV in common mode</li> <li>● Configured with DC power modules: ±2 kV in differential mode and ±4 kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Pluggable
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from left, front, and right and air exhaust from rear
PoE	Supported

Item	Specification
Certification	EMC certification (The EMC radiated emission complies with standards requirements, although it may vary according to installation of optical modules or copper modules.) Safety certification Manufacturing certification

## 4.27.8 S5731-H48HB4XZ (02354QXB)

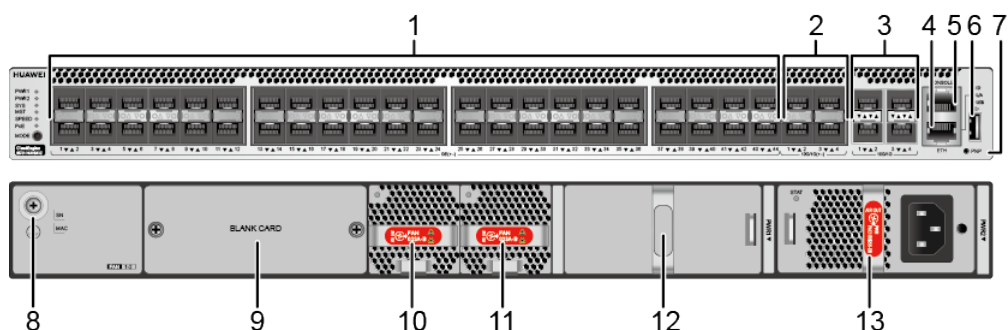
### Overview

**Table 4-1436** Basic information about the S5731-H48HB4XZ

Item	Details
Description	S5731-H48HB4XZ(44*Hybrid GE SFP ports, 4*Hybrid 10GE SFP+ ports, 4*10GE SFP+ ports, 1*expansion slot, PoE++, without power module)
Part Number	02354QXB
Model	S5731-H48HB4XZ
First supported version	V200R021C10SPC500

### Components

**Figure 4-559** S5731-H48HB4XZ appearance





1	<p>Forty-four FE/GE hybrid optical-electrical ports (supporting PoE++)</p> <p><b>NOTE</b></p> <p>In V200R023C00 and later versions, ports numbered GE1 to GE8 and GE25 to GE44 can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.</p>	2	<p>Four 10GE SFP+ hybrid optical-electrical ports (supporting PoE++)</p> <p><b>NOTE</b></p> <p>In V200R023C00 and later versions, 10GE SFP+ hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.</p>
3	Four 10GE SFP+ optical ports	4	One ETH management port
5	One console port	6	One USB port
7	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	8	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p> <p>Two OT grounding holes are provided on the side of the switch. If two OT terminals are required for grounding, you can purchase the two OT terminals separately.</p>
9	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Applicable card:</p> <ul style="list-style-type: none"> <li>• <b>ES5D21X08T00</b></li> <li>• <b>ES5D21Q02Q00</b></li> <li>• <b>S7X08000 (02312URW)</b></li> <li>• <b>S7X08000 (02312URW-002)</b> (applicable in V200R021C10SPC600 and later versions)</li> <li>• <b>S7Q02001 (02313UBW)</b></li> <li>• <b>S7Q02001 (02313UBW-002)</b> (applicable in V200R021C10SPC600 and later versions)</li> </ul> <p>If the rate of an port is set to 2.5 Gbit/s, the rear card cannot be used.</p>	10	<p>Fan module slot 1</p> <p><b>NOTE</b></p> <p>Applicable fan module: <b>7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</b></p>

<p>1 1</p>	<p>Fan module slot 2</p> <p><b>NOTE</b>                  Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	<p>1 2</p>	<p>Power module slot 1</p> <p><b>NOTE</b>                  Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a></li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a></li> </ul>
<p>1 3</p>	<p>Power module slot 2</p> <p><b>NOTE</b>                  Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a></li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a></li> </ul>	<p>-</p>	<p>-</p>

## Ports

**Table 4-1437** Ports on the S5731-H48HB4XZ

Port	Connector Type	Description	Available Components
100/1000BASE-X hybrid optical-electrical port	SFP	<p>A 100/1000BASE-X hybrid optical-electrical port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s. It can provide PoE power through hybrid cable.</p> <p>In V200R023C00 and later versions, ports numbered GE1 to GE8 and GE25 to GE44 can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"><li>• <b>FE SFP/eSFP optical modules</b></li><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>GE SFP Hybrid Modules</b></li><li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</b></li><li>• <b>2.5GE eSFP Hybrid Modules (supported in V200R023C00 and later versions)</b></li><li>• <b>Hybrid cable 2.0</b></li></ul>

Port	Connector Type	Description	Available Components
<p>10GE SFP+ hybrid optical-electrical port</p>	<p>SFP+</p>	<p>A 10GE SFP+ hybrid optical-electrical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s, 2.5 Gbit/s, or 10 Gbit/s. It can provide PoE power through hybrid cable.</p> <p>In V200R023C00 and later versions, 10GE SFP+ hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules</b></li> <li>● <b>10GE-DWDM SFP+ optical modules</b></li> <li>● <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables</b></li> <li>● <b>GE SFP Hybrid Modules</b></li> <li>● <b>10GE SFP+ Hybrid Modules</b></li> <li>● <b>2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</b></li> <li>● <b>2.5GE eSFP Hybrid Modules</b></li> </ul>

Port	Connector Type	Description	Available Components
			<p>(supported in V200R023C00 and later versions)</p> <ul style="list-style-type: none"> <li>• Hybrid cable 2.0</li> </ul>
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• GE eSFP optical modules</li> <li>• GE-CWDM eSFP optical modules</li> <li>• GE-DWDM eSFP optical modules</li> <li>• GE SFP copper module</li> <li>• 10GE SFP+ optical modules (OSXD22N00 not supported)</li> <li>• 10GE-CWDM SFP+ optical modules</li> <li>• 10GE-DWDM SFP+ optical modules</li> <li>• 1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</li> <li>• 3 m and 10 m SFP+ AOC cables</li> <li>• 0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</li> </ul>

Port	Connector Type	Description	Available Components
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

The S5731-H48HB4XZ has the same types of indicators as the S5731-H24HB4XZ. For details, see the S5731-H24HB4XZ.

## Power Supply System

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1438** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	795 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 26</li> <li>● 802.3bt (60 W per port): 13</li> <li>● 802.3bt (90 W per port): 8</li> </ul>
1000 W AC (110 V)	–	700 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 45</li> <li>● 802.3at (30 W per port): 23</li> <li>● 802.3bt (60 W per port): 11</li> <li>● 802.3bt (90 W per port): 7</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1745 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 48</li> <li>● 802.3bt (60 W per port): 29</li> <li>● 802.3bt (90 W per port): 19</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1555 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 48</li> <li>● 802.3bt (60 W per port): 25</li> <li>● 802.3bt (90 W per port): 17</li> </ul>
600 W AC (220 V)	–	415 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 26</li> <li>● 802.3at (30 W per port): 13</li> <li>● 802.3bt (60 W per port): 6</li> <li>● 802.3bt (90 W per port): 4</li> </ul>



Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
600 W AC (110 V)	–	130 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 8</li> <li>● 802.3at (30 W per port): 4</li> <li>● 802.3bt (60 W per port): 2</li> <li>● 802.3bt (90 W per port): 1</li> </ul>
600 W AC (220 V)	600 W AC (220 V)	985 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 32</li> <li>● 802.3bt (60 W per port): 16</li> <li>● 802.3bt (90 W per port): 10</li> </ul>
600 W AC (110 V)	600 W AC (110 V)	415 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 26</li> <li>● 802.3at (30 W per port): 13</li> <li>● 802.3bt (60 W per port): 6</li> <li>● 802.3bt (90 W per port): 4</li> </ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1365 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 45</li> <li>● 802.3bt (60 W per port): 22</li> <li>● 802.3bt (90 W per port): 15</li> </ul>

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

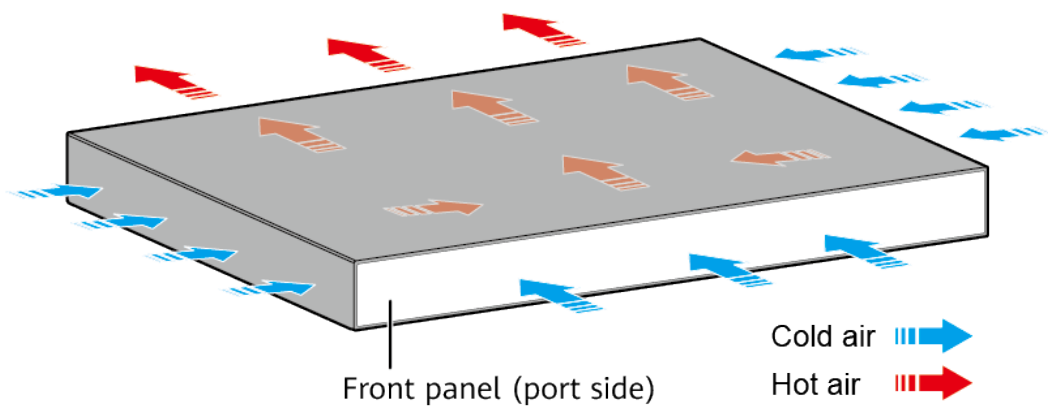
When a hybrid optical-electrical port is used for PoE power supply, the power supply capability and distance vary according to hybrid cables with different cable diameters. You can use the [Central Switch-to-RU Cable Length Calculation Tool](#) to calculate the power supply distance of the hybrid cable in different scenarios.

**NOTE**

- The hybrid switch uses hybrid cables to connect to and supply power to APs or remote units of specific models. (For details about the AP models to which hybrid cables can supply power, see the WLAN AP product documentation. The remote unit that supports hybrid cables is S5731-L4P2HW-RUA, S5731S-L4P2HW-RUA, S5731-L4P2HT-RUA, S5731S-L4P2HT-RUA, S5731-L8P2HT-RUA, and S5731S-L8P2HT-RUA.)
- The hybrid switch cannot be connected to devices other than remote units or APs using hybrid cables.

## Heat Dissipation System

The switch uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1439** Technical specifications of the S5731-H48HB4XZ

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U

Item	Specification
Weight without packaging [kg(lb)]	6.16 kg (13.58 lb)
Weight with packaging [kg(lb)]	7.96 kg (17.55 lb)
Typical power consumption [W]	118 W
Typical heat dissipation [BTU/hour]	402.63 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 151 W (without cards)</li> <li>Full PoE load: 1927 W (PoE: 1745 W, without cards)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 515.23 (without cards)</li> <li>Full PoE load: 6575.12 (without cards)</li> </ul>
Static power consumption [W]	66 W
MTBF [years]	53.82 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Dual-AC 600 W, 70% load: 57.77 dBA Dual-AC 1000 W, 70% load: 63.78 dBA Dual-DC 1000 W, 70% load: 62.38 dBA Dual-AC 600 W, 100% load: 63.78 dBA Dual-AC 1000 W, 100% load: 68.07 dBA Dual-DC 1000 W, 100% load: 66.26 dBA
Number of card slots	1
Number of power slots	2
Number of fans modules	2
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.51 ft.)

Item	Specification
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: -48 V DC to -60 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 290 V AC; 45–65 Hz</li> <li>● High-voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum input current [A]	The current specifications are related to the pluggable power module. For details, see Pluggable Power Modules.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	<ul style="list-style-type: none"> <li>● Configured with AC power modules: ±6 kV in differential mode and ±6 kV in common mode</li> <li>● Configured with DC power modules: ±2 kV in differential mode and ±4 kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Pluggable
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from left, front, and right and air exhaust from rear
PoE	Supported

Item	Specification
Certification	EMC certification (The EMC radiated emission complies with standards requirements, although it may vary according to installation of optical modules or copper modules.) Safety certification Manufacturing certification

## 4.27.9 S5731-H48HB4XZ (02354QXB-001)

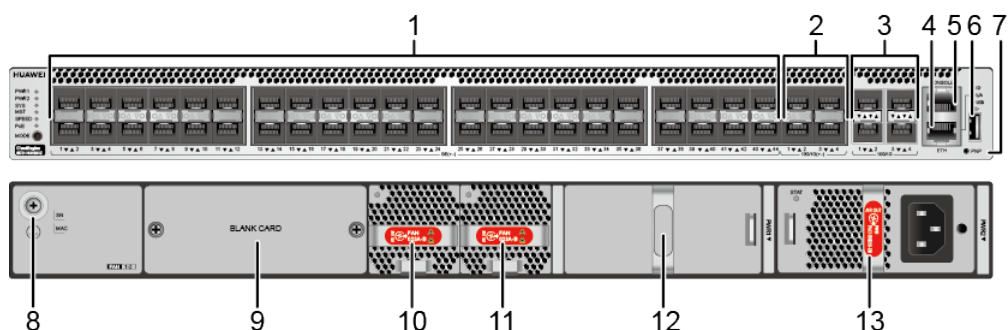
### Overview

**Table 4-1440** Basic information about the S5731-H48HB4XZ

Item	Details
Description	S5731-H48HB4XZ(44*Hybrid GE SFP ports, 4*Hybrid 10GE SFP+ ports, 4*10GE SFP+ ports, 1*expansion slot, PoE++, without power module)
Part Number	02354QXB-001
Model	S5731-H48HB4XZ
First supported version	V200R021C10SPC600

### Components

**Figure 4-560** S5731-H48HB4XZ appearance



1	<p>Forty-four FE/GE hybrid optical-electrical ports (supporting PoE++)</p> <p><b>NOTE</b></p> <p>In V200R023C00 and later versions, ports numbered GE1 to GE8 and GE25 to GE44 can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.</p>	2	<p>Four 10GE SFP+ hybrid optical-electrical ports (supporting PoE++)</p> <p><b>NOTE</b></p> <p>In V200R023C00 and later versions, 10GE SFP+ hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.</p>
3	Four 10GE SFP+ optical ports	4	One ETH management port
5	One console port	6	One USB port
7	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	8	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p> <p>Two OT grounding holes are provided on the side of the switch. If two OT terminals are required for grounding, you can purchase the two OT terminals separately.</p>
9	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Applicable card:</p> <ul style="list-style-type: none"> <li>• <b>ES5D21X08T00</b></li> <li>• <b>ES5D21Q02Q00</b></li> <li>• <b>S7X08000 (02312URW)</b></li> <li>• <b>S7X08000 (02312URW-002)</b> (applicable in V200R021C10SPC600 and later versions)</li> <li>• <b>S7Q02001 (02313UBW)</b></li> <li>• <b>S7Q02001 (02313UBW-002)</b> (applicable in V200R021C10SPC600 and later versions)</li> </ul> <p>If the rate of an port is set to 2.5 Gbit/s, the rear card cannot be used.</p>	10	<p>Fan module slot 1</p> <p><b>NOTE</b></p> <p>Applicable fan module: <b>7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</b></p>

<p>1 1</p>	<p>Fan module slot 2</p> <p><b>NOTE</b>                  Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	<p>1 2</p>	<p>Power module slot 1</p> <p><b>NOTE</b>                  Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a></li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a></li> </ul>
<p>1 3</p>	<p>Power module slot 2</p> <p><b>NOTE</b>                  Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a></li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a></li> </ul>	<p>-</p>	<p>-</p>



## Ports

**Table 4-1441** Ports on the S5731-H48HB4XZ

Port	Connector Type	Description	Available Components
100/1000BASE-X hybrid optical-electrical port	SFP	<p>A 100/1000BASE-X hybrid optical-electrical port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s. It can provide PoE power through hybrid cable.</p> <p>In V200R023C00 and later versions, ports numbered GE1 to GE8 and GE25 to GE44 can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"> <li>• <b>FE SFP/eSFP optical modules</b></li> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>GE SFP Hybrid Modules</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</b></li> <li>• <b>2.5GE eSFP Hybrid Modules (supported in V200R023C00 and later versions)</b></li> <li>• <b>Hybrid cable 2.0</b></li> </ul>

Port	Connector Type	Description	Available Components
10GE SFP+ hybrid optical-electrical port	SFP+	<p>A 10GE SFP+ hybrid optical-electrical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s, 2.5 Gbit/s, or 10 Gbit/s. It can provide PoE power through hybrid cable.</p> <p>In V200R023C00 and later versions, 10GE SFP+ hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"> <li>● <a href="#">GE eSFP optical modules</a></li> <li>● <a href="#">GE-CWDM eSFP optical modules</a></li> <li>● <a href="#">GE-DWDM eSFP optical modules</a></li> <li>● <a href="#">GE SFP copper module</a></li> <li>● <a href="#">10GE SFP+ optical modules (OSXD22N00 not supported)</a></li> <li>● <a href="#">10GE-CWDM SFP+ optical modules</a></li> <li>● <a href="#">10GE-DWDM SFP+ optical modules</a></li> <li>● <a href="#">1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</a></li> <li>● <a href="#">3 m and 10 m SFP+ AOC cables</a></li> <li>● <a href="#">GE SFP Hybrid Modules</a></li> <li>● <a href="#">10GE SFP+ Hybrid Modules</a></li> <li>● <a href="#">2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</a></li> <li>● <a href="#">2.5GE eSFP Hybrid Modules</a></li> </ul>

Port	Connector Type	Description	Available Components
			<p>(supported in V200R023C00 and later versions)</p> <ul style="list-style-type: none"> <li>Hybrid cable 2.0</li> </ul>
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>GE eSFP optical modules</li> <li>GE-CWDM eSFP optical modules</li> <li>GE-DWDM eSFP optical modules</li> <li>GE SFP copper module</li> <li>10GE SFP+ optical modules (OSXD22N00 not supported)</li> <li>10GE-CWDM SFP+ optical modules</li> <li>10GE-DWDM SFP+ optical modules</li> <li>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</li> <li>3 m and 10 m SFP+ AOC cables</li> <li>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</li> </ul>

Port	Connector Type	Description	Available Components
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

The S5731-H48HB4XZ has the same types of indicators as the S5731-H24HB4XZ. For details, see the S5731-H24HB4XZ.

## Power Supply System

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1442** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	795 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 26</li> <li>● 802.3bt (60 W per port): 13</li> <li>● 802.3bt (90 W per port): 8</li> </ul>
1000 W AC (110 V)	–	700 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 45</li> <li>● 802.3at (30 W per port): 23</li> <li>● 802.3bt (60 W per port): 11</li> <li>● 802.3bt (90 W per port): 7</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1745 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 48</li> <li>● 802.3bt (60 W per port): 29</li> <li>● 802.3bt (90 W per port): 19</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1555 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 48</li> <li>● 802.3bt (60 W per port): 25</li> <li>● 802.3bt (90 W per port): 17</li> </ul>
600 W AC (220 V)	–	415 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 26</li> <li>● 802.3at (30 W per port): 13</li> <li>● 802.3bt (60 W per port): 6</li> <li>● 802.3bt (90 W per port): 4</li> </ul>

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
600 W AC (110 V)	–	130 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 8</li> <li>• 802.3at (30 W per port): 4</li> <li>• 802.3bt (60 W per port): 2</li> <li>• 802.3bt (90 W per port): 1</li> </ul>
600 W AC (220 V)	600 W AC (220 V)	985 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 32</li> <li>• 802.3bt (60 W per port): 16</li> <li>• 802.3bt (90 W per port): 10</li> </ul>
600 W AC (110 V)	600 W AC (110 V)	415 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 26</li> <li>• 802.3at (30 W per port): 13</li> <li>• 802.3bt (60 W per port): 6</li> <li>• 802.3bt (90 W per port): 4</li> </ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1365 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 45</li> <li>• 802.3bt (60 W per port): 22</li> <li>• 802.3bt (90 W per port): 15</li> </ul>

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

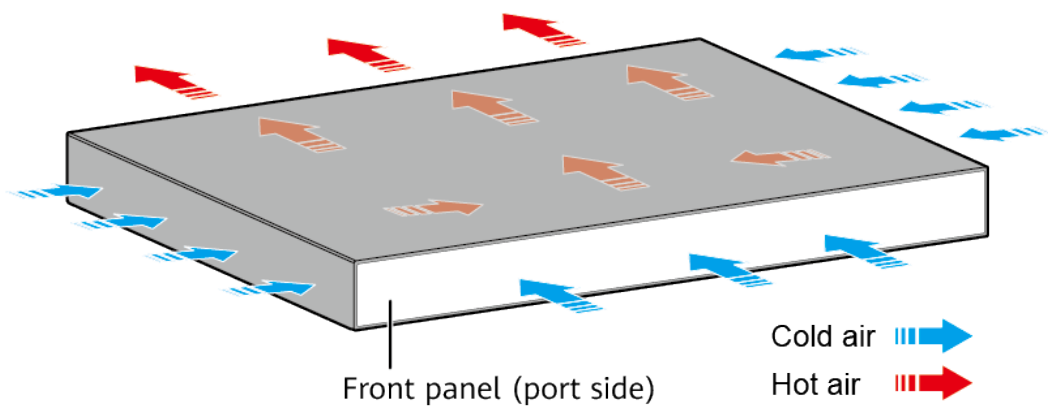
When a hybrid optical-electrical port is used for PoE power supply, the power supply capability and distance vary according to hybrid cables with different cable diameters. You can use the [Central Switch-to-RU Cable Length Calculation Tool](#) to calculate the power supply distance of the hybrid cable in different scenarios.

**NOTE**

- The hybrid switch uses hybrid cables to connect to and supply power to APs or remote units of specific models. (For details about the AP models to which hybrid cables can supply power, see the WLAN AP product documentation. The remote unit that supports hybrid cables is S5731-L4P2HW-RUA, S5731S-L4P2HW-RUA, S5731-L4P2HT-RUA, S5731S-L4P2HT-RUA, S5731-L8P2HT-RUA, and S5731S-L8P2HT-RUA.)
- The hybrid switch cannot be connected to devices other than remote units or APs using hybrid cables.

## Heat Dissipation System

The switch uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1443** Technical specifications of the S5731-H48HB4XZ

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U



Item	Specification
Weight without packaging [kg(lb)]	6.16 kg (13.58 lb)
Weight with packaging [kg(lb)]	7.96 kg (17.55 lb)
Typical power consumption [W]	118 W
Typical heat dissipation [BTU/hour]	402.63 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 151 W (without cards)</li> <li>Full PoE load: 1927 W (PoE: 1745 W, without cards)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 515.23 (without cards)</li> <li>Full PoE load: 6575.12 (without cards)</li> </ul>
Static power consumption [W]	66 W
MTBF [years]	53.82 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Dual-AC 600 W, 70% load: 57.77 dBA Dual-AC 1000 W, 70% load: 63.78 dBA Dual-DC 1000 W, 70% load: 62.38 dBA Dual-AC 600 W, 100% load: 63.78 dBA Dual-AC 1000 W, 100% load: 68.07 dBA Dual-DC 1000 W, 100% load: 66.26 dBA
Number of card slots	1
Number of power slots	2
Number of fans modules	2
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.44 ft.)

Item	Specification
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: -48 V DC to -60 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC; 45–65 Hz</li> <li>High-voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum input current [A]	The current specifications are related to the pluggable power module. For details, see Pluggable Power Modules.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	<ul style="list-style-type: none"> <li>Configured with AC power modules: <math>\pm 6</math> kV in differential mode and <math>\pm 6</math> kV in common mode</li> <li>Configured with DC power modules: <math>\pm 2</math> kV in differential mode and <math>\pm 4</math> kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Pluggable
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from left, front, and right and air exhaust from rear
PoE	Supported

Item	Specification
Certification	EMC certification (The EMC radiated emission complies with standards requirements, although it may vary according to installation of optical modules or copper modules.) Safety certification Manufacturing certification

## 4.28 S5731S-H

### 4.28.1 S5731S-H24T4XC-A (02352YRG/ 02352YRG-001/02352YRG-003)

#### Version Mapping

[Table 4-1444](#) lists the mapping between the S5731S-H24T4XC-A chassis and software versions.

**Table 4-1444** Version mapping

Series	Model	Software Version
S5731S-H	S5731S-H24T4XC-A	02352YRG: V200R019C00 and later versions 02352YRG-001: V200R020C10 and later versions 02352YRG-003: V200R021C10SPC600 and later versions (If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch. If V200R021C00SPC100 is used, install V200R021SPH013 or a later patch.)

## Appearance and Structure

Figure 4-561 S5731S-H24T4XC-A (02352YRG) appearance

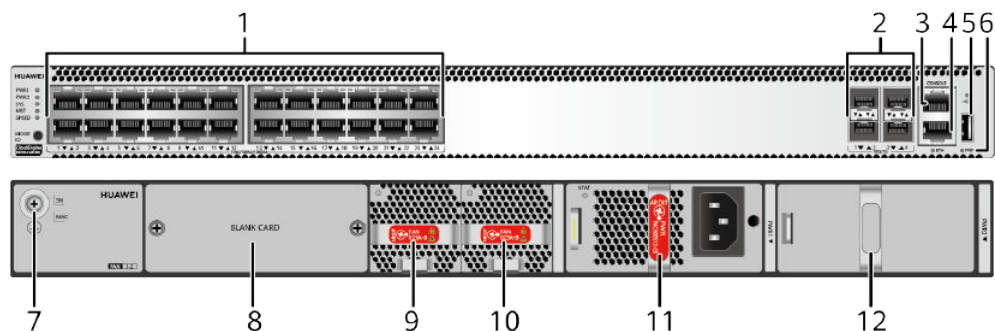
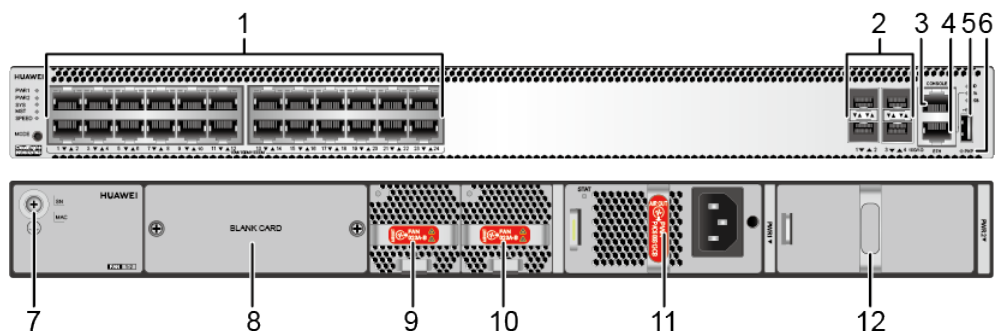


Figure 4-562 S5731S-H24T4XC-A (02352YRG-001/02352YRG-003) appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One console port	4	One ETH management port

5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Applicable card:</p> <ul style="list-style-type: none"> <li>• <a href="#">ES5D21X08T00</a></li> <li>• <a href="#">ES5D21Q02Q00</a></li> <li>• <a href="#">S7X08000 (02312URW)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">S7X08000 (02312URW-002)</a> (applicable in V200R021C10SPC600 and later versions)</li> <li>• <a href="#">S7Q02001 (02313UBW)</a> (applicable in V200R021C01 and later versions)</li> <li>• <a href="#">S7Q02001 (02313UBW-002)</a> (applicable in V200R021C10SPC600 and later versions)</li> </ul>
9	<p>Fan module slot 1</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	10	<p>Fan module slot 2</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>
11	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>	12	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1445](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1445** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1446](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1446** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1447](#).

**Table 4-1447** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1448](#) describes the attributes of an ETH management port.

**Table 4-1448** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.



 NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

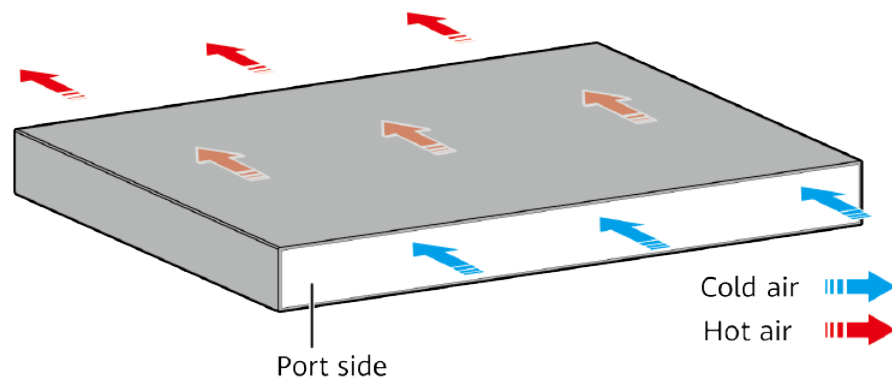
The S5731S-H24T4XC-A has similar indicators to those on the S5731-H48P4XC except that the S5731S-H24T4XC-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation

The S5731S-H24T4XC-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1449](#) lists technical specifications of the S5731S-H24T4XC-A.

**Table 4-1449** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.

Item	Description
Mean time between failures (MTBF)	57.73 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)</li> </ul>
Weight (with packaging)	9.35 kg (20.61 lb)
Stack ports	10GE SFP+ ports on the front panel, or ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	114 W (without card)

Item	Description
Typical power consumption (30% of traffic load, tested according to ATIS standard)	88 W (without card)
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02352YRG 02352YRG-001 02352YRG-003

## 4.28.2 S5731S-H48T4XC-A (02352YRF/02352YRF-003/02352YRF-005)

### Version Mapping

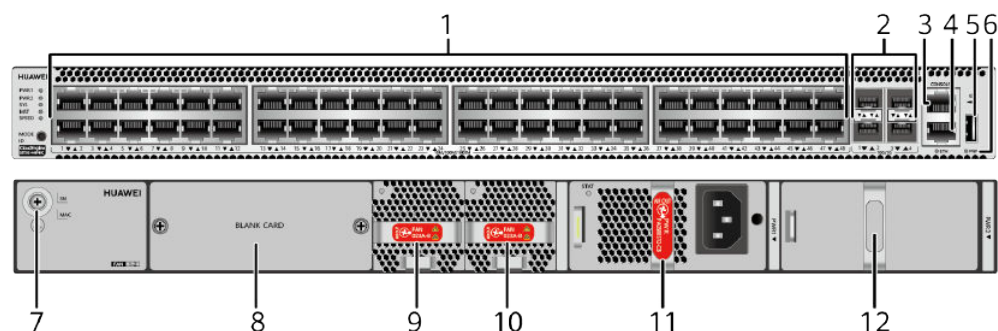
[Table 4-1450](#) lists the mapping between the S5731S-H48T4XC-A chassis and software versions.

**Table 4-1450** Version mapping

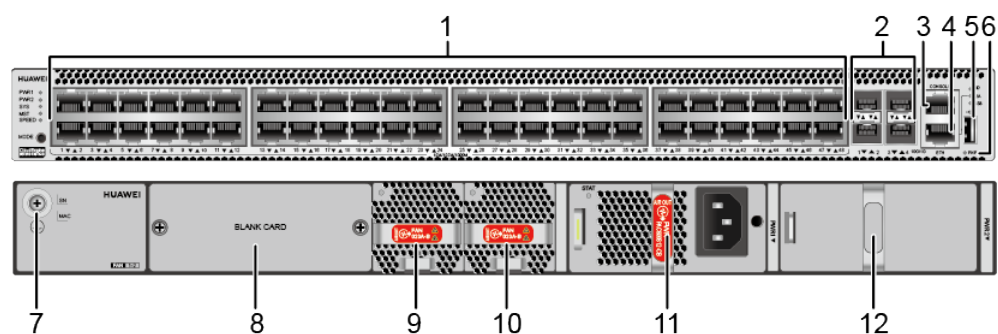
Series	Model	Software Version
S5731S-H	S5731S-H48T4XC-A	02352YRF: V200R019C00 and later versions 02352YRF-003: V200R020C10 and later versions 02352YRF-005: V200R021C10SPC600 and later versions (If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch. If V200R021C00SPC100 is used, install V200R021SPH013 or a later patch.)

## Appearance and Structure

**Figure 4-563** S5731S-H48T4XC-A (02352YRF) appearance



**Figure 4-564** S5731S-H48T4XC-A (02352YRF-003/02352YRF-005) appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	8	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Applicable card:</p> <ul style="list-style-type: none"> <li>• <b>E55D21X08T00</b></li> <li>• <b>E55D21Q02Q00</b></li> <li>• <b>S7X08000 (02312URW)</b> (applicable in V200R019C10 and later versions)</li> <li>• <b>S7X08000 (02312URW-002)</b> (applicable in V200R021C10SPC600 and later versions)</li> <li>• <b>S7Q02001 (02313UBW)</b> (applicable in V200R021C01 and later versions)</li> <li>• <b>S7Q02001 (02313UBW-002)</b> (applicable in V200R021C10SPC600 and later versions)</li> </ul>

9	<p>Fan module slot 1</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	10	<p>Fan module slot 2</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>
11	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>	12	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1451](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1451** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1452](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1452** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1453](#).

**Table 4-1453** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1454](#) describes the attributes of an ETH management port.

**Table 4-1454** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5731S-H48T4XC-A has similar indicators to those on the S5731-H48P4XC except that the S5731S-H48T4XC-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

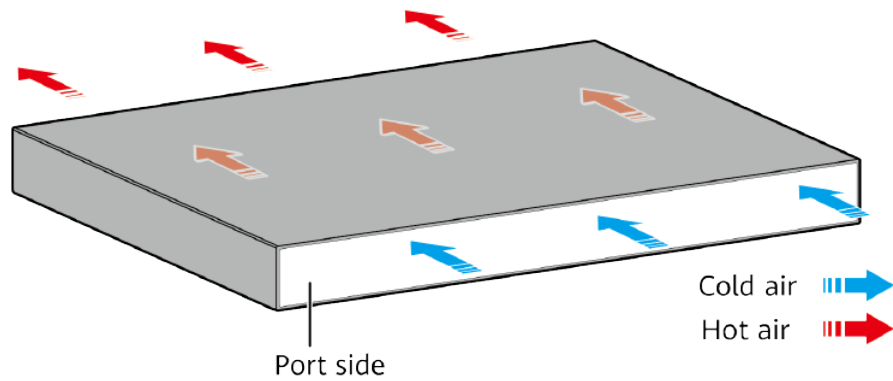
## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation

The S5731S-H48T4XC-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.





**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1455](#) lists technical specifications of the S5731S-H48T4XC-A.

**Table 4-1455** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	55.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)</li> </ul>

Item	Description
Weight (with packaging)	9.5 kg (20.94 lb)
Stack ports	10GE SFP+ ports on the front panel, or ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	124 W (without card)
Typical power consumption (30% of traffic load, tested according to ATIS standard)	101 W (without card)
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02352YRF 02352YRF-003 02352YRF-005

### 4.28.3 S5731S-H24T4S-A (02353DJE/ 02353DJE-001/02353DJE-003)

#### Version Mapping

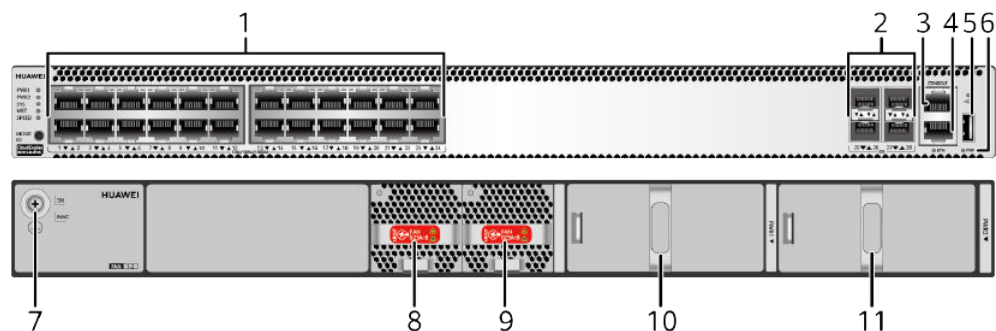
[Table 4-1456](#) lists the mapping between the S5731S-H24T4S-A chassis and software versions.

**Table 4-1456** Version mapping

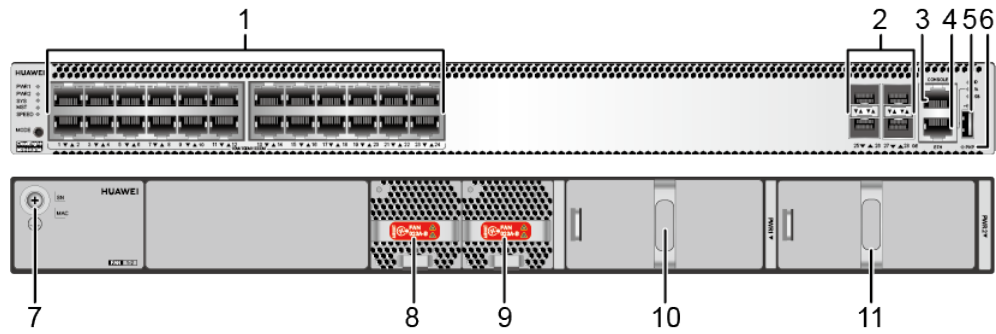
Series	Model	Software Version
S5731S-H	S5731S-H24T4S-A	02353DJE: V200R019C00 and later versions 02353DJE-001: V200R020C10 and later versions 02353DJE-003: V200R021C10SPC600 and later versions (If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch. If V200R021C00SPC100 is used, install V200R021SPH013 or a later patch.)

#### Appearance and Structure

**Figure 4-565** S5731S-H24T4S-A (02353DJE) appearance



**Figure 4-566** S5731S-H24T4S-A (02353DJE-001/02353DJE-003) appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (only applicable to stack ports, OSXD22N00 not supported)</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only applicable to stack ports)</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables (only applicable to stack ports)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Fan module slot 1</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>
9	<p>Fan module slot 2</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	10	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>
11	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1457](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1457** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1458](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1458** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1459](#).

**Table 4-1459** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1460](#) describes the attributes of an ETH management port.

**Table 4-1460** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

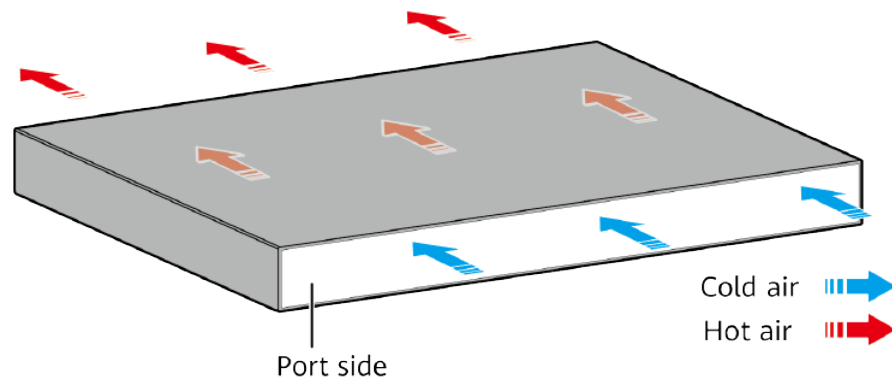
The S5731S-H24T4S-A has similar indicators to those on the S5731-H48P4XC except that the S5731S-H24T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation

The S5731S-H24T4S-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1461](#) lists technical specifications of the S5731S-H24T4S-A.

**Table 4-1461** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	57.73 years
Mean time to repair (MTTR)	2 hours



Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)</li> </ul>
Weight (with packaging)	9.35 kg (20.61 lb)
Stack ports	1000BASE-X ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	91 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	70 W

Item	Description
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02353DJE 02353DJE-001 02353DJE-003

## 4.28.4 S5731S-H48T4S-A (02353DJG/02353DJG-003/02353DJG-005)

### Version Mapping

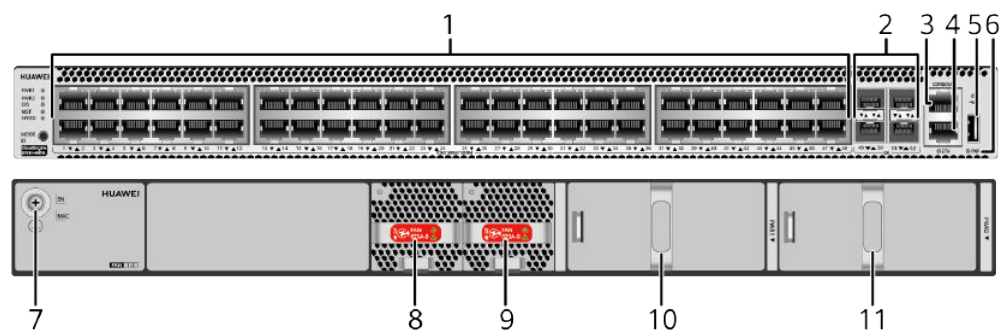
[Table 4-1462](#) lists the mapping between the S5731S-H48T4S-A chassis and software versions.

**Table 4-1462** Version mapping

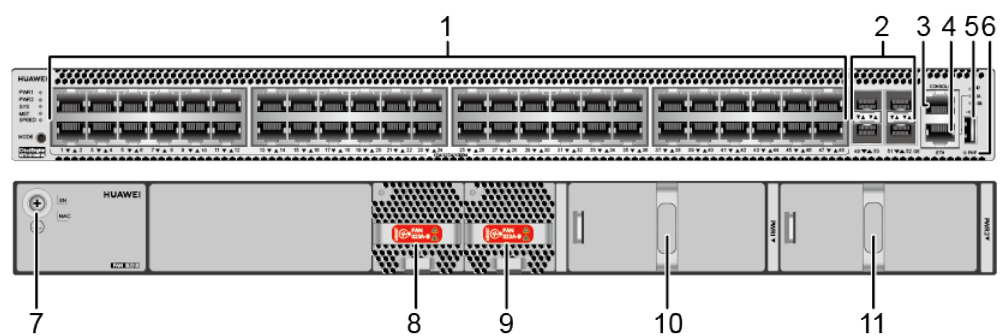
Series	Model	Software Version
S5731S-H	S5731S-H48T4S-A	02353DJG: V200R019C00 and later versions 02353DJG-003: V200R020C10 and later versions 02353DJG-005: V200R021C10SPC600 and later versions (If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch. If V200R021C00SPC100 is used, install V200R021SPH013 or a later patch.)

## Appearance and Structure

**Figure 4-567** S5731S-H48T4S-A (02353DJG) appearance



**Figure 4-568** S5731S-H48T4S-A (02353DJG-003/02353DJG-005) appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (only applicable to stack ports, OSXD22N00 not supported)</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only applicable to stack ports)</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables (only applicable to stack ports)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	8	<p>Fan module slot 1</p> <p><b>NOTE</b> Applicable fan module: <b>7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</b></p>

9	<p>Fan module slot 2</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	1 0	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>
1 1	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1463](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1463** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1464](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1464** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1465](#).

**Table 4-1465** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1466](#) describes the attributes of an ETH management port.

**Table 4-1466** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

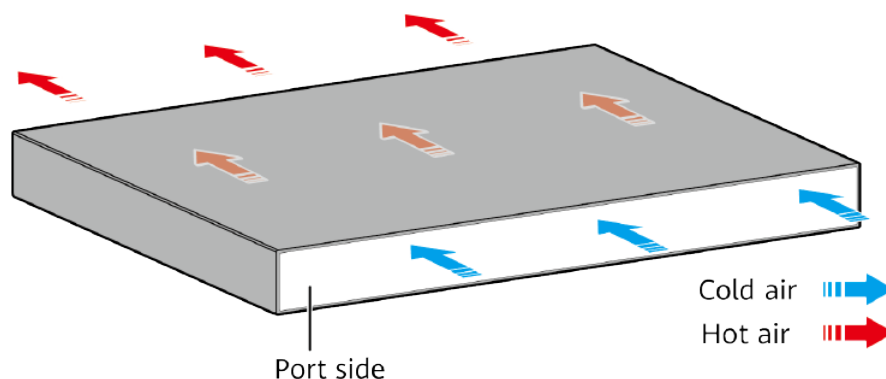
The S5731S-H48T4S-A has similar indicators to those on the S5731-H48P4XC except that the S5731S-H48T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation

The S5731S-H48T4S-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1467](#) lists technical specifications of the S5731S-H48T4S-A.

**Table 4-1467** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	55.31 years
Mean time to repair (MTTR)	2 hours



Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)</li> </ul>
Weight (with packaging)	9.5 kg (20.94 lb)
Stack ports	1000BASE-X ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	113 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	85 W

Item	Description
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02353DJG 02353DJG-003 02353DJG-005

## 4.28.5 S5731S-H24T4X-A (02353HVH/02353HVH-001/02353HVH-003)

### Version Mapping

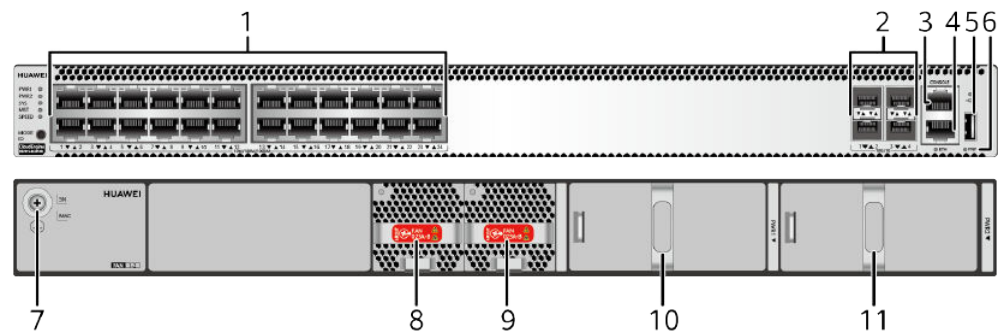
[Table 4-1468](#) lists the mapping between the S5731S-H24T4X-A chassis and software versions.

**Table 4-1468** Version mapping

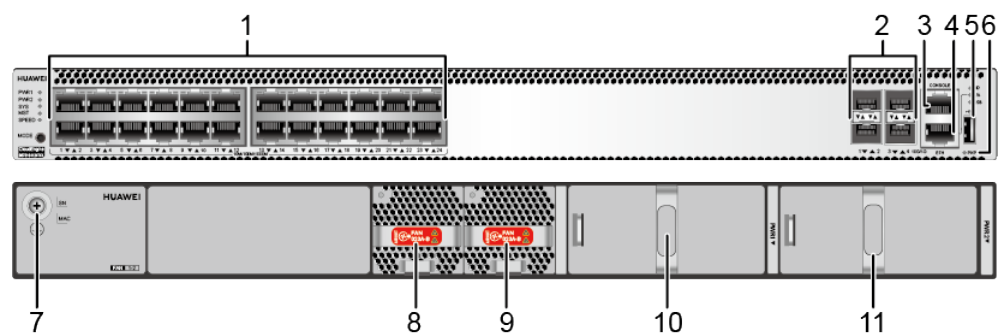
Series	Model	Software Version
S5731S-H	S5731S-H24T4X-A	02353HVH: V200R019C10 and later versions 02353HVH-001: V200R020C10 and later versions 02353HVH-003: V200R021C10SPC600 and later versions (If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch. If V200R021C00SPC100 is used, install V200R021SPH013 or a later patch.)

## Appearance and Structure

**Figure 4-569** S5731S-H24T4X-A (02353HVH) appearance



**Figure 4-570** S5731S-H24T4X-A (02353HVH-001/02353HVH-003) appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	8	Fan module slot 1 <b>NOTE</b> Applicable fan module: <b>7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</b>

9	<p>Fan module slot 2</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	1 0	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>
1 1	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1469](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1469** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1470](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1470** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1471](#).

**Table 4-1471** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 4-1472** describes the attributes of an ETH management port.

**Table 4-1472** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

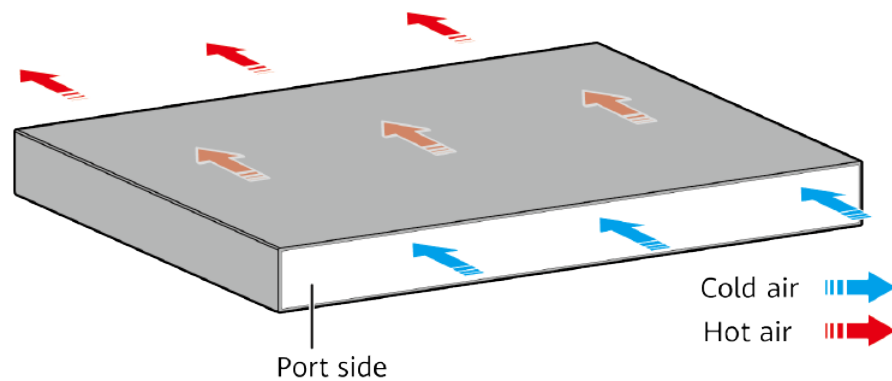
The S5731S-H24T4X-A has similar indicators to those on the S5731-H48P4XC except that the S5731S-H24T4X-A does not have a PoE mode indicator. For details, see **Indicator Description**.

## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation

The S5731S-H24T4X-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1473](#) lists technical specifications of the S5731S-H24T4X-A.

**Table 4-1473** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	57.73 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV



Item	Description
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)</li> </ul>
Weight (with packaging)	9.35 kg (20.61 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	114 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	88 W

Item	Description
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>● EMC certification</li> <li>● Safety certification</li> <li>● Manufacturing certification</li> </ul>
Part number	02353HVH 02353HVH-001 02353HVH-003

## 4.28.6 S5731S-H48T4X-A (02353HVJ/02353HVJ-003/02353HVJ-005)

### Version Mapping

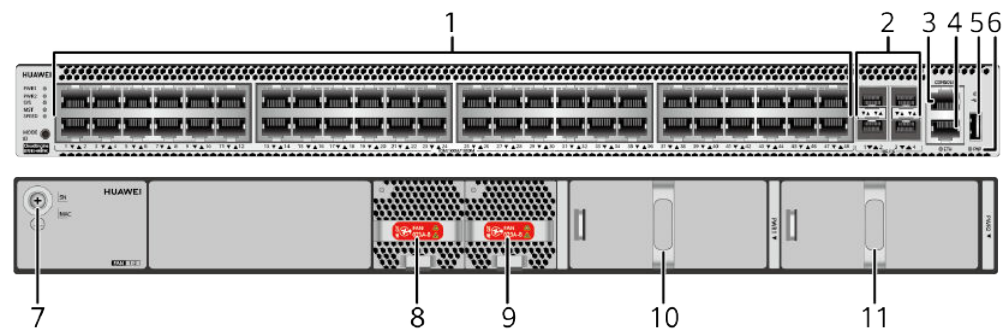
[Table 4-1474](#) lists the mapping between the S5731S-H48T4X-A chassis and software versions.

**Table 4-1474** Version mapping

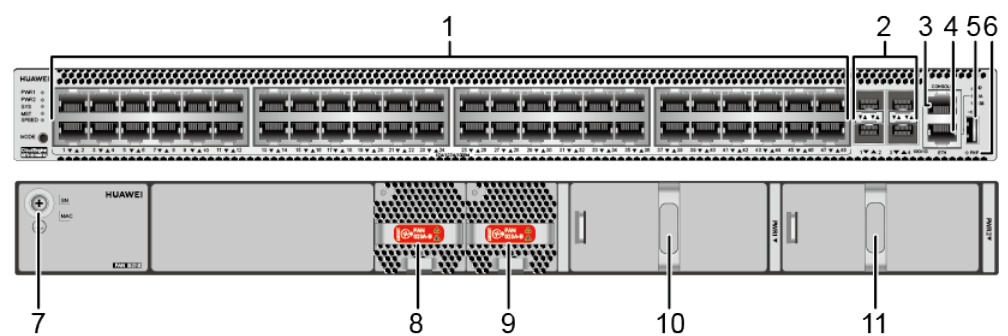
Series	Model	Software Version
S5731S-H	S5731S-H48T4X-A	02353HVJ: V200R019C10 and later versions 02353HVJ-003: V200R020C10 and later versions 02353HVJ-005: V200R021C10SPC600 and later versions (If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch. If V200R021C00SPC100 is used, install V200R021SPH013 or a later patch.)

## Appearance and Structure

**Figure 4-571** S5731S-H48T4X-A (02353HVJ) appearance



**Figure 4-572** S5731S-H48T4X-A (02353HVJ-003/02353HVJ-005) appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	8	<p>Fan module slot 1</p> <p><b>NOTE</b></p> <p>Applicable fan module: <b>7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</b></p>

9	<p>Fan module slot 2</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	1 0	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>
1 1	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1475](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1475** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1476](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1476** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1477](#).

**Table 4-1477** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 4-1478** describes the attributes of an ETH management port.

**Table 4-1478** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

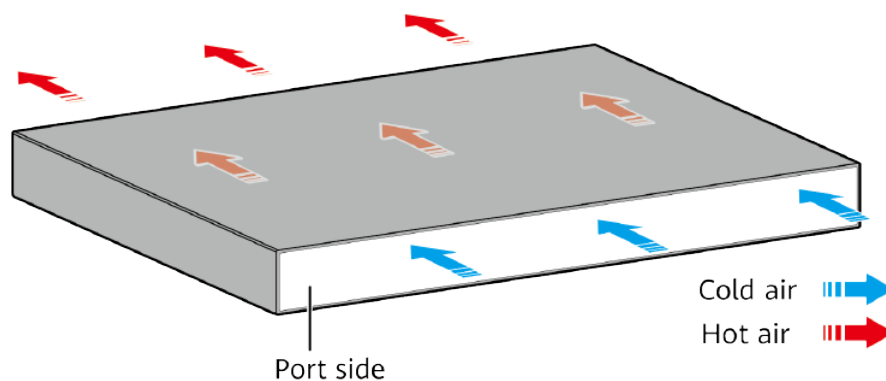
The S5731S-H48T4X-A has similar indicators to those on the S5731-H48P4XC except that the S5731S-H48T4X-A does not have a PoE mode indicator. For details, see **Indicator Description**.

## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation

The S5731S-H48T4X-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1479](#) lists technical specifications of the S5731S-H48T4X-A.

**Table 4-1479** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	55.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV



Item	Description
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)</li> </ul>
Weight (with packaging)	9.5 kg (20.94 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	124 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	101 W

Item	Description
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02353HVJ 02353HVJ-003 02353HVJ-005

## 4.28.7 S5731S-H24HB4XZ-A (02354QXE)

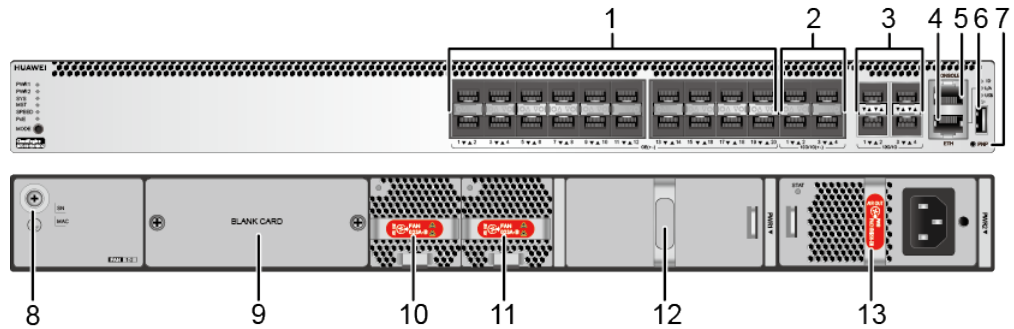
### Overview

**Table 4-1480** Basic information about the S5731S-H24HB4XZ-A

Item	Details
Description	S5731S-H24HB4XZ Bundle(20*Hybrid GE SFP ports, 4*Hybrid 10GE SFP+ ports, 4*10GE SFP+ ports, 1*expansion slot, PoE++, 1*AC power)
Part Number	02354QXE
Model	S5731S-H24HB4XZ-A
First supported version	V200R021C10SPC500

## Components

Figure 4-573 S5731S-H24HB4XZ-A appearance



1	<p>Twenty 100/1000BASE-X hybrid optical-electrical ports (supporting PoE++)</p> <p><b>NOTE</b></p> <p>In V200R023C00 and later versions, 100/1000BASE-X hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.</p>	2	<p>Four 10GE SFP+ hybrid optical-electrical ports (supporting PoE++)</p> <p><b>NOTE</b></p> <p>In V200R023C00 and later versions, 10GE SFP+ hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.</p>
3	Four 10GE SFP+ optical ports	4	One ETH management port
5	One console port	6	One USB port
7	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	8	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p> <p>Two OT grounding holes are provided on the side of the switch. If two OT terminals are required for grounding, you can purchase the two OT terminals separately.</p>

9	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Applicable card:</p> <ul style="list-style-type: none"> <li>• <a href="#">ES5D21X08T00</a></li> <li>• <a href="#">ES5D21Q02Q00</a></li> <li>• <a href="#">S7X08000 (02312URW)</a></li> <li>• <a href="#">S7X08000 (02312URW-002)</a> (applicable in V200R021C10SPC600 and later versions)</li> <li>• <a href="#">S7Q02001 (02313UBW)</a></li> <li>• <a href="#">S7Q02001 (02313UBW-002)</a> (applicable in V200R021C10SPC600 and later versions)</li> </ul> <p>If the rate of an port is set to 2.5 Gbit/s, the rear card cannot be used.</p>	1 0	<p>Fan module slot 1</p> <p><b>NOTE</b></p> <p>Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>
1 1	<p>Fan module slot 2</p> <p><b>NOTE</b></p> <p>Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	1 2	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a></li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a></li> </ul>

1 3	Power module slot 2	-	-
	<p><b>NOTE</b></p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> <li>• 5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</li> <li>• 5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</li> <li>• 5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</li> <li>• 5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</li> <li>• 5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</li> </ul>		

## Ports

**Table 4-1481** Ports on the S5731S-H24HB4XZ-A

Port	Connector Type	Description	Available Components
100/1000BASE-X hybrid optical-electrical port	SFP	<p>A 100/1000BASE-X hybrid optical-electrical port can send and receive data at 100 Mbit/s or 1000 Mbit/s. It can provide PoE power through hybrid cable.</p> <p>In V200R023C00 and later versions, 100/1000BASE-X hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"><li>• <b>FE SFP/eSFP optical modules</b></li><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>GE SFP Hybrid Modules</b></li><li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</b></li><li>• <b>2.5GE eSFP Hybrid Modules (supported in V200R023C00 and later versions)</b></li><li>• <b>Hybrid cable 2.0</b></li></ul>

Port	Connector Type	Description	Available Components
10GE SFP+ hybrid optical-electrical port	SFP+	<p>A 10GE SFP+ hybrid optical-electrical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s, 2.5 Gbit/s, or 10 Gbit/s. It can provide PoE power through hybrid cable.</p> <p>In V200R023C00 and later versions, 10GE SFP+ hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"> <li>● <a href="#">GE eSFP optical modules</a></li> <li>● <a href="#">GE-CWDM eSFP optical modules</a></li> <li>● <a href="#">GE-DWDM eSFP optical modules</a></li> <li>● <a href="#">GE SFP copper module</a></li> <li>● <a href="#">10GE SFP+ optical modules (OSXD22N00 not supported)</a></li> <li>● <a href="#">10GE-CWDM SFP+ optical modules</a></li> <li>● <a href="#">10GE-DWDM SFP+ optical modules</a></li> <li>● <a href="#">1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</a></li> <li>● <a href="#">3 m and 10 m SFP+ AOC cables</a></li> <li>● <a href="#">GE SFP Hybrid Modules</a></li> <li>● <a href="#">10GE SFP+ Hybrid Modules</a></li> <li>● <a href="#">2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</a></li> <li>● <a href="#">2.5GE eSFP Hybrid Modules</a></li> </ul>

Port	Connector Type	Description	Available Components
			<p>(supported in V200R023C00 and later versions)</p> <ul style="list-style-type: none"> <li>• Hybrid cable 2.0</li> </ul>
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• GE eSFP optical modules</li> <li>• GE-CWDM eSFP optical modules</li> <li>• GE-DWDM eSFP optical modules</li> <li>• GE SFP copper module</li> <li>• 10GE SFP+ optical modules (OSXD22N00 not supported)</li> <li>• 10GE-CWDM SFP+ optical modules</li> <li>• 10GE-DWDM SFP+ optical modules</li> <li>• 1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</li> <li>• 3 m and 10 m SFP+ AOC cables</li> <li>• 0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</li> </ul>

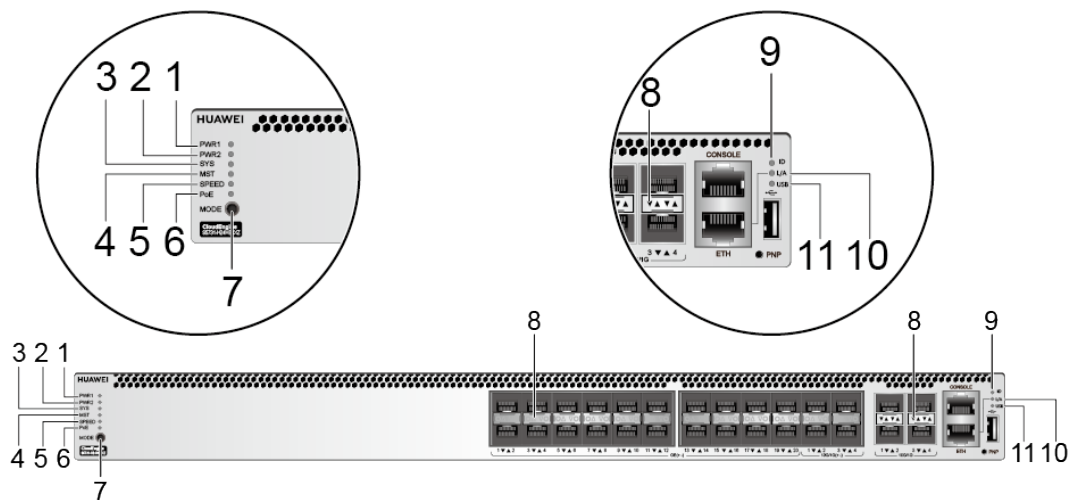


Port	Connector Type	Description	Available Components
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

Figure 4-574 Indicators on the switch



**Table 4-1482** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.

No.	Indicator	Name	Color	Status	Description
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p> <p><b>NOTE</b> Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> <li>If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows: <ul style="list-style-type: none"> <li>If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.</li> <li>If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.</li> </ul> </li> <li>If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.</li> </ul>

No.	Indicator	Name	Color	Status	Description
8	-	Hybrid optical-electrical port indicator	Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1483</a> and <a href="#">Table 4-1484</a> .
		10GE optical port indicator	Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		
9	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
10	L/A	ETH port indicator	-	Off	The ETH port is not connected.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
11	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1483** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.



Display Mode	Color	Status	Description
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"><li>• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li><li>• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li></ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"><li>• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li><li>• If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li></ul>
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	100M/1000M port: The port is operating at 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.

**Table 4-1484** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode (LINK indicator)	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
Default mode (ACT indicator)	-	Off	The port is not connected or has been shut down, or no data is transmitted or received.
	Yellow	Blinking	The port is sending or receiving data.
Speed mode (LINK indicator)	-	Off	The port is not connected or has been shut down.
	Green	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s.

## Power Supply System

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1485** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	-	818 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 13</li> <li>• 802.3bt (90 W per port): 9</li> </ul>

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (110 V)	–	723 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 12</li> <li>● 802.3bt (90 W per port): 8</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1768 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 24</li> <li>● 802.3bt (90 W per port): 19</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1578 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 24</li> <li>● 802.3bt (90 W per port): 17</li> </ul>
600 W AC (220 V)	–	438 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 14</li> <li>● 802.3bt (60 W per port): 7</li> <li>● 802.3bt (90 W per port): 4</li> </ul>
600 W AC (110 V)	–	153 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 9</li> <li>● 802.3at (30 W per port): 5</li> <li>● 802.3bt (60 W per port): 2</li> <li>● 802.3bt (90 W per port): 1</li> </ul>

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
600 W AC (220 V)	600 W AC (220 V)	1008 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 16</li> <li>• 802.3bt (90 W per port): 11</li> </ul>
600 W AC (110 V)	600 W AC (110 V)	438 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 14</li> <li>• 802.3bt (60 W per port): 7</li> <li>• 802.3bt (90 W per port): 4</li> </ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1388 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 23</li> <li>• 802.3bt (90 W per port): 15</li> </ul>

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

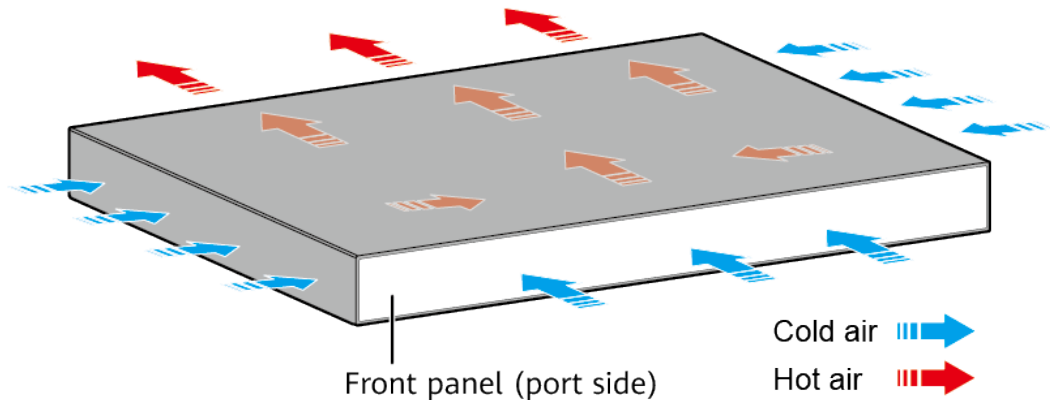
When a hybrid optical-electrical port is used for PoE power supply, the power supply capability and distance vary according to hybrid cables with different cable diameters. You can use the [Central Switch-to-RU Cable Length Calculation Tool](#) to calculate the power supply distance of the hybrid cable in different scenarios.

 **NOTE**

- The hybrid switch uses hybrid cables to connect to and supply power to APs or remote units of specific models. (For details about the AP models to which hybrid cables can supply power, see the WLAN AP product documentation. The remote unit that supports hybrid cables is S5731-L4P2HW-RUA, S5731S-L4P2HW-RUA, S5731-L4P2HT-RUA, S5731S-L4P2HT-RUA, S5731-L8P2HT-RUA, and S5731S-L8P2HT-RUA.)
- The hybrid switch cannot be connected to devices other than remote units or APs using hybrid cables.

## Heat Dissipation System

The switch uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1486** Technical specifications of the S5731S-H24HB4XZ-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	6.6 kg (14.55 lb)
Weight with packaging [kg(lb)]	8.4 kg (18.52 lb)
Typical power consumption [W]	87 W
Typical heat dissipation [BTU/hour]	296.85 BTU/hour

Item	Specification
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>• Without PoE: 127 W (without cards)</li> <li>• Full PoE load: 1927 W (PoE: 1768 W, without cards)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>• Without PoE: 433.34 (without cards)</li> <li>• Full PoE load: 6575.12 (without cards)</li> </ul>
Static power consumption [W]	66 W
MTBF [years]	53.82 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Dual-AC 600 W, 70% load: 57.77 dBA Dual-AC 1000 W, 70% load: 63.78 dBA Dual-DC 1000 W, 70% load: 62.38 dBA Dual-AC 600 W, 100% load: 63.78 dBA Dual-AC 1000 W, 100% load: 68.07 dBA Dual-DC 1000 W, 100% load: 66.26 dBA
Number of card slots	1
Number of power slots	2
Number of fans modules	2
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.51 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"><li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li><li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li><li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li></ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	–40°C to +70°C (–40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Storage altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"><li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li><li>• High-voltage DC input: 240 V DC</li><li>• DC input: –48 V DC to –60 V DC</li></ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>• AC input: 90 V AC to 290 V AC; 45–65 Hz</li> <li>• High-voltage DC input: 190 V DC to 290 V DC</li> <li>• DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum input current [A]	The current specifications are related to the pluggable power module. For details, see Pluggable Power Modules.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	<ul style="list-style-type: none"> <li>• Configured with AC power modules: ±6 kV in differential mode and ±6 kV in common mode</li> <li>• Configured with DC power modules: ±2 kV in differential mode and ±4 kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from left, front, and right and air exhaust from rear
PoE	Supported



Item	Specification
Certification	EMC certification (The EMC radiated emission complies with standards requirements, although it may vary according to installation of optical modules or copper modules.) Safety certification Manufacturing certification

### 4.28.8 S5731S-H24HB4XZ-A (02354QXE-001)

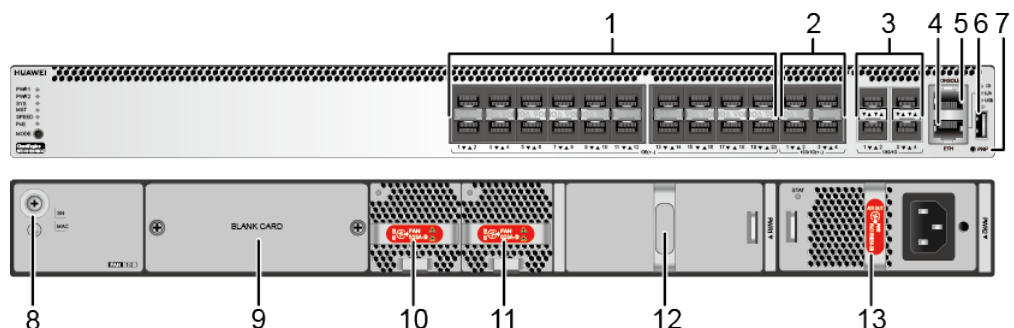
#### Overview

**Table 4-1487** Basic information about the S5731S-H24HB4XZ-A

Item	Details
Description	S5731S-H24HB4XZ Bundle(20*Hybrid GE SFP ports, 4*Hybrid 10GE SFP+ ports, 4*10GE SFP+ ports, 1*expansion slot, PoE++, 1*AC power)
Part Number	02354QXE-001
Model	S5731S-H24HB4XZ-A
First supported version	V200R021C10SPC600

#### Components

**Figure 4-575** S5731S-H24HB4XZ-A appearance



1	<p>Twenty 100/1000BASE-X hybrid optical-electrical ports (supporting PoE++)</p> <p><b>NOTE</b></p> <p>In V200R023C00 and later versions, 100/1000BASE-X hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.</p>	2	<p>Four 10GE SFP+ hybrid optical-electrical ports (supporting PoE++)</p> <p><b>NOTE</b></p> <p>In V200R023C00 and later versions, 10GE SFP+ hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.</p>
3	Four 10GE SFP+ optical ports	4	One ETH management port
5	One console port	6	One USB port
7	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	8	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p> <p>Two OT grounding holes are provided on the side of the switch. If two OT terminals are required for grounding, you can purchase the two OT terminals separately.</p>
9	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Applicable card:</p> <ul style="list-style-type: none"> <li>• <b>ES5D21X08T00</b></li> <li>• <b>ES5D21Q02Q00</b></li> <li>• <b>S7X08000 (02312URW)</b></li> <li>• <b>S7X08000 (02312URW-002)</b> (applicable in V200R021C10SPC600 and later versions)</li> <li>• <b>S7Q02001 (02313UBW)</b></li> <li>• <b>S7Q02001 (02313UBW-002)</b> (applicable in V200R021C10SPC600 and later versions)</li> </ul> <p>If the rate of an port is set to 2.5 Gbit/s, the rear card cannot be used.</p>	10	<p>Fan module slot 1</p> <p><b>NOTE</b></p> <p>Applicable fan module: <b>7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</b></p>

<p>1 1</p>	<p>Fan module slot 2</p> <p><b>NOTE</b>                  Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	<p>1 2</p>	<p>Power module slot 1</p> <p><b>NOTE</b>                  Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a></li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a></li> </ul>
<p>1 3</p>	<p>Power module slot 2</p> <p><b>NOTE</b>                  Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a></li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a></li> </ul>	<p>-</p>	<p>-</p>

## Ports

**Table 4-1488** Ports on the S5731S-H24HB4XZ-A

Port	Connector Type	Description	Available Components
100/1000BASE-X hybrid optical-electrical port	SFP	<p>A 100/1000BASE-X hybrid optical-electrical port can send and receive data at 100 Mbit/s or 1000 Mbit/s. It can provide PoE power through hybrid cable.</p> <p>In V200R023C00 and later versions, 100/1000BASE-X hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"> <li>• <b>FE SFP/eSFP optical modules</b></li> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>GE SFP Hybrid Modules</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</b></li> <li>• <b>2.5GE eSFP Hybrid Modules (supported in V200R023C00 and later versions)</b></li> <li>• <b>Hybrid cable 2.0</b></li> </ul>

Port	Connector Type	Description	Available Components
10GE SFP+ hybrid optical-electrical port	SFP+	<p>A 10GE SFP+ hybrid optical-electrical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s, 2.5 Gbit/s, or 10 Gbit/s. It can provide PoE power through hybrid cable.</p> <p>In V200R023C00 and later versions, 10GE SFP+ hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"> <li>● <a href="#">GE eSFP optical modules</a></li> <li>● <a href="#">GE-CWDM eSFP optical modules</a></li> <li>● <a href="#">GE-DWDM eSFP optical modules</a></li> <li>● <a href="#">GE SFP copper module</a></li> <li>● <a href="#">10GE SFP+ optical modules (OSXD22N00 not supported)</a></li> <li>● <a href="#">10GE-CWDM SFP+ optical modules</a></li> <li>● <a href="#">10GE-DWDM SFP+ optical modules</a></li> <li>● <a href="#">1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</a></li> <li>● <a href="#">3 m and 10 m SFP+ AOC cables</a></li> <li>● <a href="#">GE SFP Hybrid Modules</a></li> <li>● <a href="#">10GE SFP+ Hybrid Modules</a></li> <li>● <a href="#">2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</a></li> <li>● <a href="#">2.5GE eSFP Hybrid Modules</a></li> </ul>

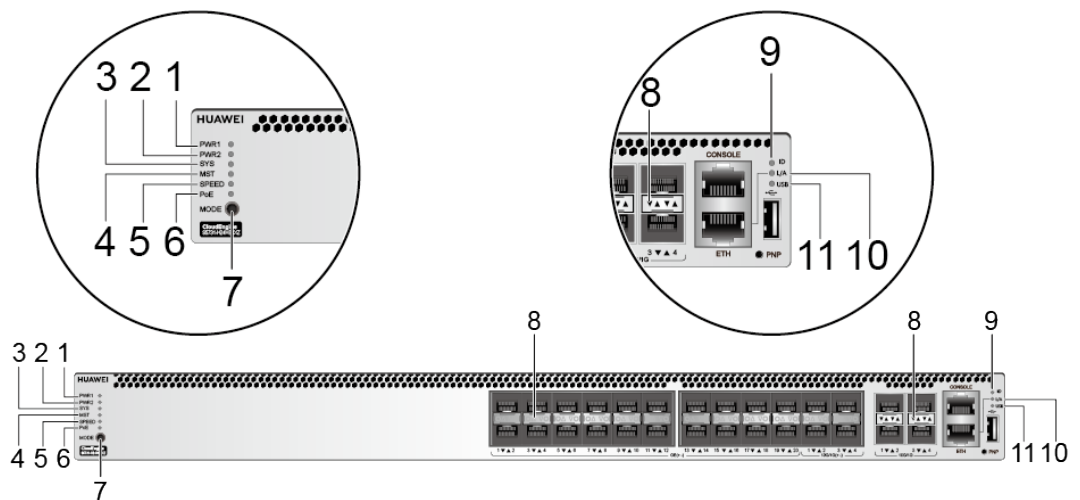
Port	Connector Type	Description	Available Components
			<p>(supported in V200R023C00 and later versions)</p> <ul style="list-style-type: none"> <li>Hybrid cable 2.0</li> </ul>
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>GE eSFP optical modules</li> <li>GE-CWDM eSFP optical modules</li> <li>GE-DWDM eSFP optical modules</li> <li>GE SFP copper module</li> <li>10GE SFP+ optical modules (OSXD22N00 not supported)</li> <li>10GE-CWDM SFP+ optical modules</li> <li>10GE-DWDM SFP+ optical modules</li> <li>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</li> <li>3 m and 10 m SFP+ AOC cables</li> <li>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</li> </ul>

Port	Connector Type	Description	Available Components
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

Figure 4-576 Indicators on the switch





**Table 4-1489** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.

No.	Indicator	Name	Color	Status	Description
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p> <p><b>NOTE</b> Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> <li>If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows: <ul style="list-style-type: none"> <li>If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.</li> <li>If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.</li> </ul> </li> <li>If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.</li> </ul>

No.	Indicator	Name	Color	Status	Description
8	-	Hybrid optical-electrical port indicator	Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1490</a> and <a href="#">Table 4-1491</a> .
		10GE optical port indicator	Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		
9	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
10	L/A	ETH port indicator	-	Off	The ETH port is not connected.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
11	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1490** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	100M/1000M port: The port is operating at 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.

**Table 4-1491** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode (LINK indicator)	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
Default mode (ACT indicator)	-	Off	The port is not connected or has been shut down, or no data is transmitted or received.
	Yellow	Blinking	The port is sending or receiving data.
Speed mode (LINK indicator)	-	Off	The port is not connected or has been shut down.
	Green	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s.

## Power Supply System

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1492** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	-	818 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 13</li> <li>802.3bt (90 W per port): 9</li> </ul>



Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (110 V)	–	723 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 12</li> <li>● 802.3bt (90 W per port): 8</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1768 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 24</li> <li>● 802.3bt (90 W per port): 19</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1578 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 24</li> <li>● 802.3bt (90 W per port): 17</li> </ul>
600 W AC (220 V)	–	438 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 14</li> <li>● 802.3bt (60 W per port): 7</li> <li>● 802.3bt (90 W per port): 4</li> </ul>
600 W AC (110 V)	–	153 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 9</li> <li>● 802.3at (30 W per port): 5</li> <li>● 802.3bt (60 W per port): 2</li> <li>● 802.3bt (90 W per port): 1</li> </ul>

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
600 W AC (220 V)	600 W AC (220 V)	1008 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 16</li> <li>802.3bt (90 W per port): 11</li> </ul>
600 W AC (110 V)	600 W AC (110 V)	438 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 14</li> <li>802.3bt (60 W per port): 7</li> <li>802.3bt (90 W per port): 4</li> </ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1388 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 23</li> <li>802.3bt (90 W per port): 15</li> </ul>

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

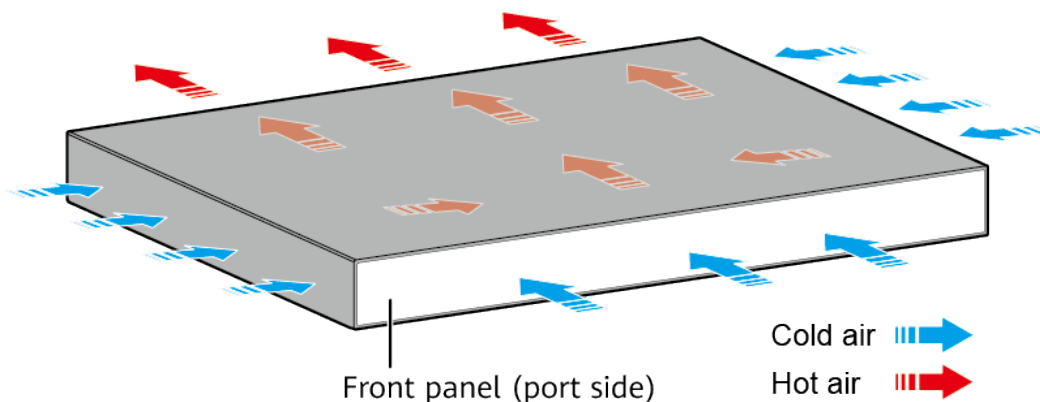
When a hybrid optical-electrical port is used for PoE power supply, the power supply capability and distance vary according to hybrid cables with different cable diameters. You can use the [Central Switch-to-RU Cable Length Calculation Tool](#) to calculate the power supply distance of the hybrid cable in different scenarios.

 **NOTE**

- The hybrid switch uses hybrid cables to connect to and supply power to APs or remote units of specific models. (For details about the AP models to which hybrid cables can supply power, see the WLAN AP product documentation. The remote unit that supports hybrid cables is S5731-L4P2HW-RUA, S5731S-L4P2HW-RUA, S5731-L4P2HT-RUA, S5731S-L4P2HT-RUA, S5731-L8P2HT-RUA, and S5731S-L8P2HT-RUA.)
- The hybrid switch cannot be connected to devices other than remote units or APs using hybrid cables.

## Heat Dissipation System

The switch uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1493** Technical specifications of the S5731S-H24HB4XZ-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	6.6 kg (14.55 lb)
Weight with packaging [kg(lb)]	8.4 kg (18.52 lb)
Typical power consumption [W]	87 W
Typical heat dissipation [BTU/hour]	296.85 BTU/hour

Item	Specification
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 127 W (without cards)</li> <li>Full PoE load: 1927 W (PoE: 1768 W, without cards)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 433.34 (without cards)</li> <li>Full PoE load: 6575.12 (without cards)</li> </ul>
Static power consumption [W]	66 W
MTBF [years]	53.82 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Dual-AC 600 W, 70% load: 57.77 dBA Dual-AC 1000 W, 70% load: 63.78 dBA Dual-DC 1000 W, 70% load: 62.38 dBA Dual-AC 600 W, 100% load: 63.78 dBA Dual-AC 1000 W, 100% load: 68.07 dBA Dual-DC 1000 W, 100% load: 66.26 dBA
Number of card slots	1
Number of power slots	2
Number of fans modules	2
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.44 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	–40°C to +70°C (–40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Storage altitude [m(ft.)]	0–5000 m (0–16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: –48 V DC to –60 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 290 V AC; 45–65 Hz</li> <li>● High-voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum input current [A]	The current specifications are related to the pluggable power module. For details, see Pluggable Power Modules.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	<ul style="list-style-type: none"> <li>● Configured with AC power modules: ±6 kV in differential mode and ±6 kV in common mode</li> <li>● Configured with DC power modules: ±2 kV in differential mode and ±4 kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from left, front, and right and air exhaust from rear
PoE	Supported

Item	Specification
Certification	EMC certification (The EMC radiated emission complies with standards requirements, although it may vary according to installation of optical modules or copper modules.) Safety certification Manufacturing certification

## 4.28.9 S5731S-H48HB4XZ-A (02354QXC)

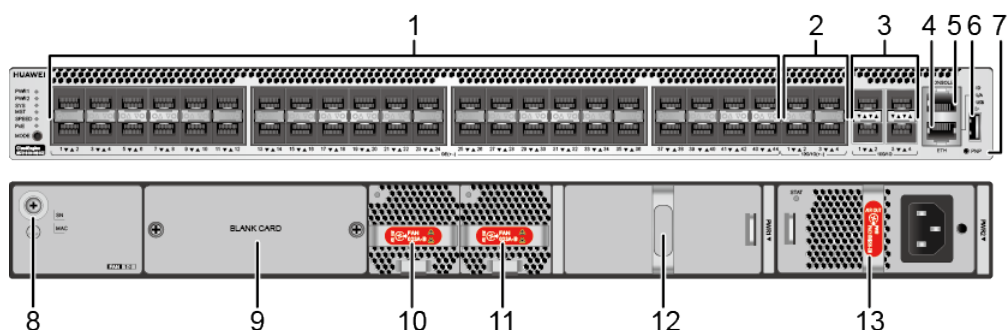
### Overview

**Table 4-1494** Basic information about the S5731S-H48HB4XZ-A

Item	Details
Description	S5731S-H48HB4XZ Bundle(44*Hybrid GE SFP ports, 4*Hybrid 10GE SFP+ ports, 4*10GE SFP+ ports, 1*expansion slot, PoE++, 1*AC power)
Part Number	02354QXC
Model	S5731S-H48HB4XZ-A
First supported version	V200R021C10SPC500

### Components

**Figure 4-577** S5731S-H48HB4XZ-A appearance



1	<p>Forty-four FE/GE hybrid optical-electrical ports (supporting PoE++)</p> <p><b>NOTE</b></p> <p>In V200R023C00 and later versions, ports numbered GE1 to GE8 and GE25 to GE44 can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.</p>	2	<p>Four 10GE SFP+ hybrid optical-electrical ports (supporting PoE++)</p> <p><b>NOTE</b></p> <p>In V200R023C00 and later versions, 10GE SFP+ hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.</p>
3	Four 10GE SFP+ optical ports	4	One ETH management port
5	One console port	6	One USB port
7	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	8	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p> <p>Two OT grounding holes are provided on the side of the switch. If two OT terminals are required for grounding, you can purchase the two OT terminals separately.</p>
9	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Applicable card:</p> <ul style="list-style-type: none"> <li>• <b>ES5D21X08T00</b></li> <li>• <b>ES5D21Q02Q00</b></li> <li>• <b>S7X08000 (02312URW)</b></li> <li>• <b>S7X08000 (02312URW-002)</b> (applicable in V200R021C10SPC600 and later versions)</li> <li>• <b>S7Q02001 (02313UBW)</b></li> <li>• <b>S7Q02001 (02313UBW-002)</b> (applicable in V200R021C10SPC600 and later versions)</li> </ul> <p>If the rate of an port is set to 2.5 Gbit/s, the rear card cannot be used.</p>	10	<p>Fan module slot 1</p> <p><b>NOTE</b></p> <p>Applicable fan module: <b>7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</b></p>



<p>1 1</p>	<p>Fan module slot 2</p> <p><b>NOTE</b>                  Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	<p>1 2</p>	<p>Power module slot 1</p> <p><b>NOTE</b>                  Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a></li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a></li> </ul>
<p>1 3</p>	<p>Power module slot 2</p> <p><b>NOTE</b>                  Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a></li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a></li> </ul>	<p>-</p>	<p>-</p>

## Ports

**Table 4-1495** Ports on the S5731S-H48HB4XZ-A

Port	Connector Type	Description	Available Components
100/1000BASE-X hybrid optical-electrical port	SFP	<p>A 100/1000BASE-X hybrid optical-electrical port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s. It can provide PoE power through hybrid cable.</p> <p>In V200R023C00 and later versions, ports numbered GE1 to GE8 and GE25 to GE44 can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"> <li>• <b>FE SFP/eSFP optical modules</b></li> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>GE SFP Hybrid Modules</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</b></li> <li>• <b>2.5GE eSFP Hybrid Modules (supported in V200R023C00 and later versions)</b></li> <li>• <b>Hybrid cable 2.0</b></li> </ul>

Port	Connector Type	Description	Available Components
10GE SFP+ hybrid optical-electrical port	SFP+	<p>A 10GE SFP+ hybrid optical-electrical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s, 2.5 Gbit/s, or 10 Gbit/s. It can provide PoE power through hybrid cable.</p> <p>In V200R023C00 and later versions, 10GE SFP+ hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"> <li>● <a href="#">GE eSFP optical modules</a></li> <li>● <a href="#">GE-CWDM eSFP optical modules</a></li> <li>● <a href="#">GE-DWDM eSFP optical modules</a></li> <li>● <a href="#">GE SFP copper module</a></li> <li>● <a href="#">10GE SFP+ optical modules (OSXD22N00 not supported)</a></li> <li>● <a href="#">10GE-CWDM SFP+ optical modules</a></li> <li>● <a href="#">10GE-DWDM SFP+ optical modules</a></li> <li>● <a href="#">1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</a></li> <li>● <a href="#">3 m and 10 m SFP+ AOC cables</a></li> <li>● <a href="#">GE SFP Hybrid Modules</a></li> <li>● <a href="#">10GE SFP+ Hybrid Modules</a></li> <li>● <a href="#">2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</a></li> <li>● <a href="#">2.5GE eSFP Hybrid Modules</a></li> </ul>

Port	Connector Type	Description	Available Components
			<p>(supported in V200R023C00 and later versions)</p> <ul style="list-style-type: none"> <li>• Hybrid cable 2.0</li> </ul>
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• GE eSFP optical modules</li> <li>• GE-CWDM eSFP optical modules</li> <li>• GE-DWDM eSFP optical modules</li> <li>• GE SFP copper module</li> <li>• 10GE SFP+ optical modules (OSXD22N00 not supported)</li> <li>• 10GE-CWDM SFP+ optical modules</li> <li>• 10GE-DWDM SFP+ optical modules</li> <li>• 1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</li> <li>• 3 m and 10 m SFP+ AOC cables</li> <li>• 0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</li> </ul>

Port	Connector Type	Description	Available Components
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

The S5731S-H48HB4XZ-A has the same types of indicators as the S5731S-H24HB4XZ-A. For details, see the S5731S-H24HB4XZ-A.

## Power Supply System

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1496** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	795 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 26</li> <li>● 802.3bt (60 W per port): 13</li> <li>● 802.3bt (90 W per port): 8</li> </ul>
1000 W AC (110 V)	–	700 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 45</li> <li>● 802.3at (30 W per port): 23</li> <li>● 802.3bt (60 W per port): 11</li> <li>● 802.3bt (90 W per port): 7</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1745 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 48</li> <li>● 802.3bt (60 W per port): 29</li> <li>● 802.3bt (90 W per port): 19</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1555 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 48</li> <li>● 802.3bt (60 W per port): 25</li> <li>● 802.3bt (90 W per port): 17</li> </ul>
600 W AC (220 V)	–	415 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 26</li> <li>● 802.3at (30 W per port): 13</li> <li>● 802.3bt (60 W per port): 6</li> <li>● 802.3bt (90 W per port): 4</li> </ul>

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
600 W AC (110 V)	–	130 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 8</li> <li>• 802.3at (30 W per port): 4</li> <li>• 802.3bt (60 W per port): 2</li> <li>• 802.3bt (90 W per port): 1</li> </ul>
600 W AC (220 V)	600 W AC (220 V)	985 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 32</li> <li>• 802.3bt (60 W per port): 16</li> <li>• 802.3bt (90 W per port): 10</li> </ul>
600 W AC (110 V)	600 W AC (110 V)	415 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 26</li> <li>• 802.3at (30 W per port): 13</li> <li>• 802.3bt (60 W per port): 6</li> <li>• 802.3bt (90 W per port): 4</li> </ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1365 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 45</li> <li>• 802.3bt (60 W per port): 22</li> <li>• 802.3bt (90 W per port): 15</li> </ul>

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

When a hybrid optical-electrical port is used for PoE power supply, the power supply capability and distance vary according to hybrid cables with different cable diameters. You can use the [Central Switch-to-RU Cable Length Calculation Tool](#) to calculate the power supply distance of the hybrid cable in different scenarios.

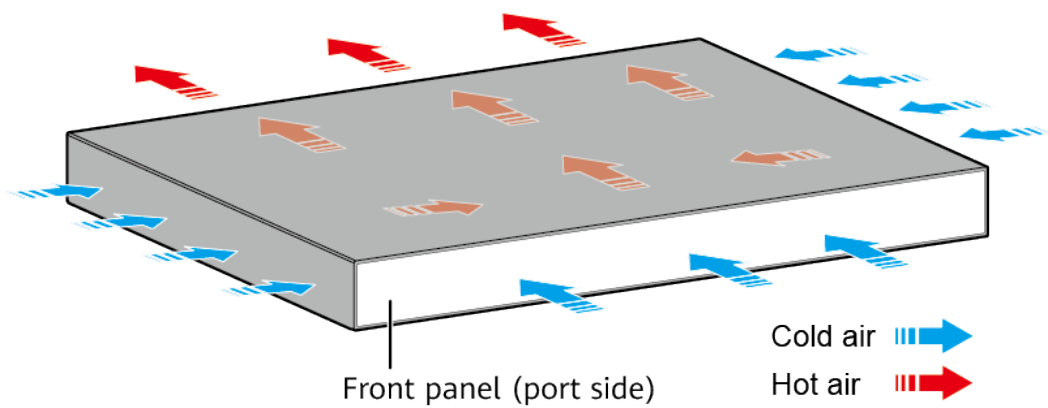


**NOTE**

- The hybrid switch uses hybrid cables to connect to and supply power to APs or remote units of specific models. (For details about the AP models to which hybrid cables can supply power, see the WLAN AP product documentation. The remote unit that supports hybrid cables is S5731-L4P2HW-RUA, S5731S-L4P2HW-RUA, S5731-L4P2HT-RUA, S5731S-L4P2HT-RUA, S5731-L8P2HT-RUA, and S5731S-L8P2HT-RUA.)
- The hybrid switch cannot be connected to devices other than remote units or APs using hybrid cables.

## Heat Dissipation System

The switch uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1497** Technical specifications of the S5731S-H48HB4XZ-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U

Item	Specification
Weight without packaging [kg(lb)]	7.06 kg (15.56 lb)
Weight with packaging [kg(lb)]	8.86 kg (19.53 lb)
Typical power consumption [W]	118 W
Typical heat dissipation [BTU/hour]	402.63 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 151 W (without cards)</li> <li>Full PoE load: 1927 W (PoE: 1745 W, without cards)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 515.23 (without cards)</li> <li>Full PoE load: 6575.12 (without cards)</li> </ul>
Static power consumption [W]	66 W
MTBF [years]	53.82 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Dual-AC 600 W, 70% load: 57.77 dBA Dual-AC 1000 W, 70% load: 63.78 dBA Dual-DC 1000 W, 70% load: 62.38 dBA Dual-AC 600 W, 100% load: 63.78 dBA Dual-AC 1000 W, 100% load: 68.07 dBA Dual-DC 1000 W, 100% load: 66.26 dBA
Number of card slots	1
Number of power slots	2
Number of fans modules	2
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.51 ft.)

Item	Specification
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: -48 V DC to -60 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>• AC input: 90 V AC to 290 V AC; 45–65 Hz</li> <li>• High-voltage DC input: 190 V DC to 290 V DC</li> <li>• DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum input current [A]	The current specifications are related to the pluggable power module. For details, see Pluggable Power Modules.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	<ul style="list-style-type: none"> <li>• Configured with AC power modules: ±6 kV in differential mode and ±6 kV in common mode</li> <li>• Configured with DC power modules: ±2 kV in differential mode and ±4 kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from left, front, and right and air exhaust from rear
PoE	Supported

Item	Specification
Certification	EMC certification (The EMC radiated emission complies with standards requirements, although it may vary according to installation of optical modules or copper modules.) Safety certification Manufacturing certification

## 4.28.10 S5731S-H48HB4XZ-A (02354QXC-001)

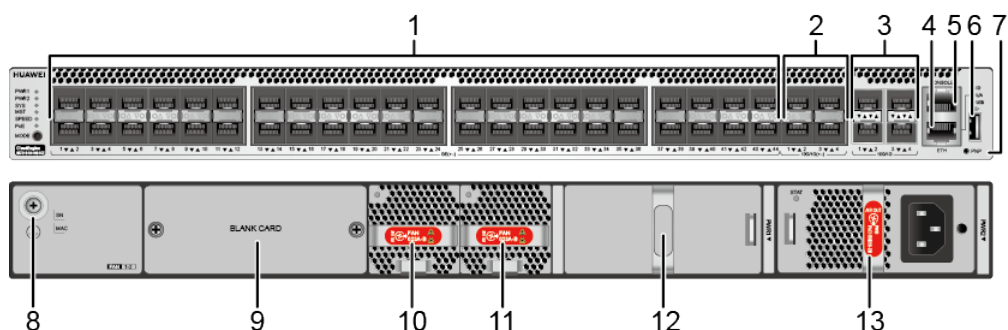
### Overview

**Table 4-1498** Basic information about the S5731S-H48HB4XZ-A

Item	Details
Description	S5731S-H48HB4XZ Bundle(44*Hybrid GE SFP ports, 4*Hybrid 10GE SFP+ ports, 4*10GE SFP+ ports, 1*expansion slot, PoE++, 1*AC power)
Part Number	02354QXC-001
Model	S5731S-H48HB4XZ-A
First supported version	V200R021C10SPC600

### Components

**Figure 4-578** S5731S-H48HB4XZ-A appearance



1	<p>Forty-four FE/GE hybrid optical-electrical ports (supporting PoE++)</p> <p><b>NOTE</b></p> <p>In V200R023C00 and later versions, ports numbered GE1 to GE8 and GE25 to GE44 can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.</p>	2	<p>Four 10GE SFP+ hybrid optical-electrical ports (supporting PoE++)</p> <p><b>NOTE</b></p> <p>In V200R023C00 and later versions, 10GE SFP+ hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the <b>port mode 2.5ge</b> command.</p>
3	Four 10GE SFP+ optical ports	4	One ETH management port
5	One console port	6	One USB port
7	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	8	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p> <p>Two OT grounding holes are provided on the side of the switch. If two OT terminals are required for grounding, you can purchase the two OT terminals separately.</p>
9	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Applicable card:</p> <ul style="list-style-type: none"> <li>• <b>ES5D21X08T00</b></li> <li>• <b>ES5D21Q02Q00</b></li> <li>• <b>S7X08000 (02312URW)</b></li> <li>• <b>S7X08000 (02312URW-002)</b> (applicable in V200R021C10SPC600 and later versions)</li> <li>• <b>S7Q02001 (02313UBW)</b></li> <li>• <b>S7Q02001 (02313UBW-002)</b> (applicable in V200R021C10SPC600 and later versions)</li> </ul> <p>If the rate of an port is set to 2.5 Gbit/s, the rear card cannot be used.</p>	10	<p>Fan module slot 1</p> <p><b>NOTE</b></p> <p>Applicable fan module: <b>7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</b></p>

<p>1 1</p>	<p>Fan module slot 2</p> <p><b>NOTE</b>                  Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	<p>1 2</p>	<p>Power module slot 1</p> <p><b>NOTE</b>                  Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a></li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a></li> </ul>
<p>1 3</p>	<p>Power module slot 2</p> <p><b>NOTE</b>                  Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a></li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a></li> </ul>	<p>-</p>	<p>-</p>

## Ports

**Table 4-1499** Ports on the S5731S-H48HB4XZ-A

Port	Connector Type	Description	Available Components
100/1000BASE-X hybrid optical-electrical port	SFP	<p>A 100/1000BASE-X hybrid optical-electrical port can send and receive data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s. It can provide PoE power through hybrid cable.</p> <p>In V200R023C00 and later versions, ports numbered GE1 to GE8 and GE25 to GE44 can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"> <li>• <b>FE SFP/eSFP optical modules</b></li> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>GE SFP Hybrid Modules</b></li> <li>• <b>2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</b></li> <li>• <b>2.5GE eSFP Hybrid Modules (supported in V200R023C00 and later versions)</b></li> <li>• <b>Hybrid cable 2.0</b></li> </ul>



Port	Connector Type	Description	Available Components
10GE SFP+ hybrid optical-electrical port	SFP+	<p>A 10GE SFP+ hybrid optical-electrical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s, 2.5 Gbit/s, or 10 Gbit/s. It can provide PoE power through hybrid cable.</p> <p>In V200R023C00 and later versions, 10GE SFP+ hybrid optical-electrical ports can be configured to work at 2.5 Gbit/s using the port mode 2.5ge command.</p>	<ul style="list-style-type: none"> <li>● <a href="#">GE eSFP optical modules</a></li> <li>● <a href="#">GE-CWDM eSFP optical modules</a></li> <li>● <a href="#">GE-DWDM eSFP optical modules</a></li> <li>● <a href="#">GE SFP copper module</a></li> <li>● <a href="#">10GE SFP+ optical modules (OSXD22N00 not supported)</a></li> <li>● <a href="#">10GE-CWDM SFP+ optical modules</a></li> <li>● <a href="#">10GE-DWDM SFP+ optical modules</a></li> <li>● <a href="#">1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</a></li> <li>● <a href="#">3 m and 10 m SFP+ AOC cables</a></li> <li>● <a href="#">GE SFP Hybrid Modules</a></li> <li>● <a href="#">10GE SFP+ Hybrid Modules</a></li> <li>● <a href="#">2.5GE eSFP Optical Modules (supported in V200R023C00 and later versions)</a></li> <li>● <a href="#">2.5GE eSFP Hybrid Modules</a></li> </ul>

Port	Connector Type	Description	Available Components
			<p>(supported in V200R023C00 and later versions)</p> <ul style="list-style-type: none"> <li>Hybrid cable 2.0</li> </ul>
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>GE eSFP optical modules</li> <li>GE-CWDM eSFP optical modules</li> <li>GE-DWDM eSFP optical modules</li> <li>GE SFP copper module</li> <li>10GE SFP+ optical modules (OSXD22N00 not supported)</li> <li>10GE-CWDM SFP+ optical modules</li> <li>10GE-DWDM SFP+ optical modules</li> <li>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</li> <li>3 m and 10 m SFP+ AOC cables</li> <li>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</li> </ul>

Port	Connector Type	Description	Available Components
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

The S5731S-H48HB4XZ-A has the same types of indicators as the S5731S-H24HB4XZ-A. For details, see the S5731S-H24HB4XZ-A.

## Power Supply System

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1500** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	795 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 26</li> <li>● 802.3bt (60 W per port): 13</li> <li>● 802.3bt (90 W per port): 8</li> </ul>
1000 W AC (110 V)	–	700 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 45</li> <li>● 802.3at (30 W per port): 23</li> <li>● 802.3bt (60 W per port): 11</li> <li>● 802.3bt (90 W per port): 7</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1745 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 48</li> <li>● 802.3bt (60 W per port): 29</li> <li>● 802.3bt (90 W per port): 19</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1555 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 48</li> <li>● 802.3bt (60 W per port): 25</li> <li>● 802.3bt (90 W per port): 17</li> </ul>
600 W AC (220 V)	–	415 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 26</li> <li>● 802.3at (30 W per port): 13</li> <li>● 802.3bt (60 W per port): 6</li> <li>● 802.3bt (90 W per port): 4</li> </ul>

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
600 W AC (110 V)	–	130 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 8</li> <li>• 802.3at (30 W per port): 4</li> <li>• 802.3bt (60 W per port): 2</li> <li>• 802.3bt (90 W per port): 1</li> </ul>
600 W AC (220 V)	600 W AC (220 V)	985 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 32</li> <li>• 802.3bt (60 W per port): 16</li> <li>• 802.3bt (90 W per port): 10</li> </ul>
600 W AC (110 V)	600 W AC (110 V)	415 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 26</li> <li>• 802.3at (30 W per port): 13</li> <li>• 802.3bt (60 W per port): 6</li> <li>• 802.3bt (90 W per port): 4</li> </ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1365 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 48</li> <li>• 802.3at (30 W per port): 45</li> <li>• 802.3bt (60 W per port): 22</li> <li>• 802.3bt (90 W per port): 15</li> </ul>

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

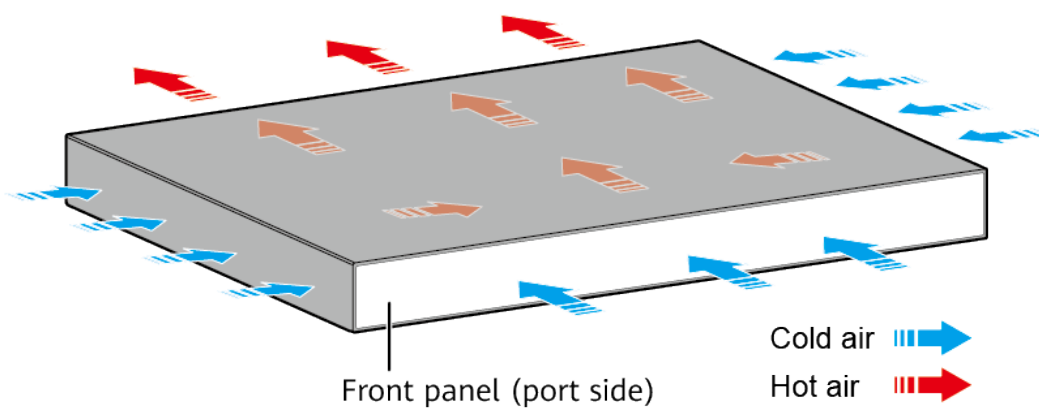
When a hybrid optical-electrical port is used for PoE power supply, the power supply capability and distance vary according to hybrid cables with different cable diameters. You can use the [Central Switch-to-RU Cable Length Calculation Tool](#) to calculate the power supply distance of the hybrid cable in different scenarios.

**NOTE**

- The hybrid switch uses hybrid cables to connect to and supply power to APs or remote units of specific models. (For details about the AP models to which hybrid cables can supply power, see the WLAN AP product documentation. The remote unit that supports hybrid cables is S5731-L4P2HW-RUA, S5731S-L4P2HW-RUA, S5731-L4P2HT-RUA, S5731S-L4P2HT-RUA, S5731-L8P2HT-RUA, and S5731S-L8P2HT-RUA.)
- The hybrid switch cannot be connected to devices other than remote units or APs using hybrid cables.

## Heat Dissipation System

The switch uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1501** Technical specifications of the S5731S-H48HB4XZ-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	185 mm x 650 mm x 550 mm (7.28 in. x 25.59 in. x 21.65 in.)
Chassis height [U]	1 U

Item	Specification
Weight without packaging [kg(lb)]	7.06 kg (15.56 lb)
Weight with packaging [kg(lb)]	8.86 kg (19.53 lb)
Typical power consumption [W]	118 W
Typical heat dissipation [BTU/hour]	402.63 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 151 W (without cards)</li> <li>Full PoE load: 1927 W (PoE: 1745 W, without cards)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 515.23 (without cards)</li> <li>Full PoE load: 6575.12 (without cards)</li> </ul>
Static power consumption [W]	66 W
MTBF [years]	53.82 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Dual-AC 600 W, 70% load: 57.77 dBA Dual-AC 1000 W, 70% load: 63.78 dBA Dual-DC 1000 W, 70% load: 62.38 dBA Dual-AC 600 W, 100% load: 63.78 dBA Dual-AC 1000 W, 100% load: 68.07 dBA Dual-DC 1000 W, 100% load: 66.26 dBA
Number of card slots	1
Number of power slots	2
Number of fans modules	2
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.44 ft.)



Item	Specification
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5905.44 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: -48 V DC to -60 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 290 V AC; 45–65 Hz</li> <li>● High-voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum input current [A]	The current specifications are related to the pluggable power module. For details, see Pluggable Power Modules.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	<ul style="list-style-type: none"> <li>● Configured with AC power modules: ±6 kV in differential mode and ±6 kV in common mode</li> <li>● Configured with DC power modules: ±2 kV in differential mode and ±4 kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling for heat dissipation, intelligent fan speed adjustment
Airflow direction	Air intake from left, front, and right and air exhaust from rear
PoE	Supported

Item	Specification
Certification	EMC certification (The EMC radiated emission complies with standards requirements, although it may vary according to installation of optical modules or copper modules.) Safety certification Manufacturing certification

## 4.29 S5732-H

### 4.29.1 S5732-H24S6Q (02353AJS/ 02353AJS-001/02353AJS-003/02353AJS-004/02353AJS-005)

#### Version Mapping

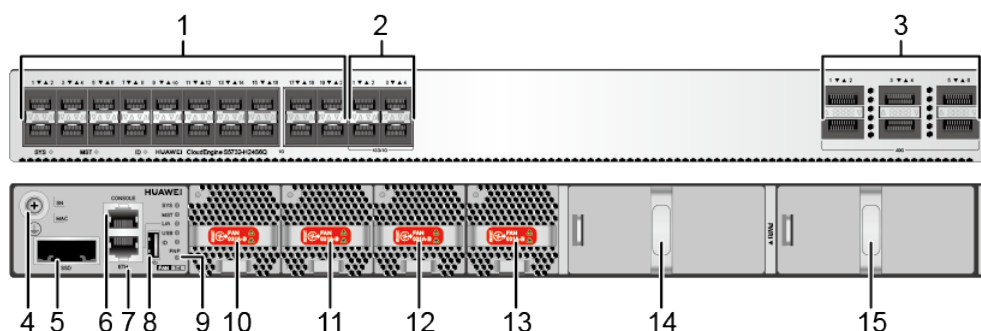
[Table 4-1502](#) lists the mapping between the S5732-H24S6Q chassis and software versions.

**Table 4-1502** Version mapping

Series	Model	Software Version
S5732-H	S5732-H24S6Q	02353AJS: V200R019C00 and later versions 02353AJS-001: V200R020C10 and later versions 02353AJS-003: V200R021C10SPC500 and later versions (If V200R021C00SPC100 is used, install V200R021SPH011 or a later patch.) 02353AJS-004: V200R021C10SPC600 and later versions (If V200R021C00SPC100 is used, install V200R021SPH013 or a later patch.) 02353AJS-005: V200R021C10SPC600 and later versions (If V200R021C00SPC100 is used, install V200R021SPH013 or a later patch.) <b>NOTE</b> V200R021C01 is not supported. Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the <b>display system-software information</b> command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Appearance and Structure

**Figure 4-579** S5732-H24S6Q appearance



1	<p>Twenty 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"><li>• <b>GE optical module</b></li><li>• <b>GE-CWDM optical module</b></li><li>• <b>GE-DWDM optical module</b></li><li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li></ul>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"><li>• <b>GE optical module</b></li><li>• <b>GE-CWDM optical module</b></li><li>• <b>GE-DWDM optical module</b></li><li>• <b>GE copper module (100M/1000M auto-sensing)</b></li><li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li><li>• <b>10GE-CWDM optical module</b></li><li>• <b>10GE-DWDM optical module</b></li><li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li><li>• <b>3 m and 10 m SFP+ AOC cables</b></li></ul>
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<p>3</p>	<p>Six 40GE/100GE QSFP+ optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>QSFP+ optical module</b></li> <li>• <b>1 m, 3 m, and 5 m QSFP+ to QSFP+ high-speed copper cables</b></li> <li>• <b>10 m QSFP+ to QSFP+ AOC cable</b></li> <li>• <b>QSFP28 optical module (supported in V200R020C00 and later versions, with a license loaded)</b></li> <li>• <b>1 m QSFP28 to QSFP28 high-speed copper cable (supported in V200R020C00 and later versions, with a license loaded)</b></li> <li>• <b>10 m QSFP28 to QSFP28 AOC cable (supported in V200R020C00 and later versions, with a license loaded)</b></li> <li>• <b>2 m QSFP28 dedicated stack cable (supported in V200R020C10 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>A QSFP+ optical port cannot be split into four 10GE ports, regardless of whether the port uses a QSFP28 or QSFP+ optical module.</p> <p>By default, a QSFP+ optical port is a 40GE port. In V200R020C00 and later versions, a license can be loaded to increase the port rate to 100 Gbit/s. After the license is activated, run the <b>assign port-type 100GE</b> command and restart the switch to configure the port as a 100GE port.</p>	<p>4</p>	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>
<p>5</p>	<p>SSD card slot</p> <p><b>NOTE</b></p> <p>This slot is reserved for future use.</p>	<p>6</p>	<p>One console port</p>
<p>7</p>	<p>One ETH management port</p>	<p>8</p>	<p>One USB port</p>

9	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	1 0	<p>Fan module slot 1</p> <p><b>NOTE</b></p> <p>Applicable fan module: <a href="#">7.5 FAN-031A-B (Fan box(B,FAN panel side exhaust))</a></p>
1 1	<p>Fan module slot 2</p> <p><b>NOTE</b></p> <p>Applicable fan module: <a href="#">7.5 FAN-031A-B (Fan box(B,FAN panel side exhaust))</a></p>	1 2	<p>Fan module slot 3</p> <p><b>NOTE</b></p> <p>Applicable fan module: <a href="#">7.5 FAN-031A-B (Fan box(B,FAN panel side exhaust))</a></p>
1 3	<p>Fan module slot 4</p> <p><b>NOTE</b></p> <p>Applicable fan module: <a href="#">7.5 FAN-031A-B (Fan box(B,FAN panel side exhaust))</a></p>	1 4	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> </ul>
1 5	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> </ul>	-	-

## Port Description

### 1000BASE-X Ethernet Optical Port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission

speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1503](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1503** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

#### 10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1504](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1504** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

#### 40GE QSFP+ optical port

A 40GE QSFP+ optical port sends and receives service traffic at 40 Gbit/s. [Table 4-1505](#) describes the attributes of a QSFP+ optical port.

**Table 4-1505** Attributes of a QSFP+ optical port

Attribute	Description
Connector type	MPO/LC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ba



### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1506](#).

**Table 4-1506** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1507](#) describes the attributes of an ETH management port.

**Table 4-1507** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to

the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

Figure 4-580 Indicators on the S5732-H24S6Q

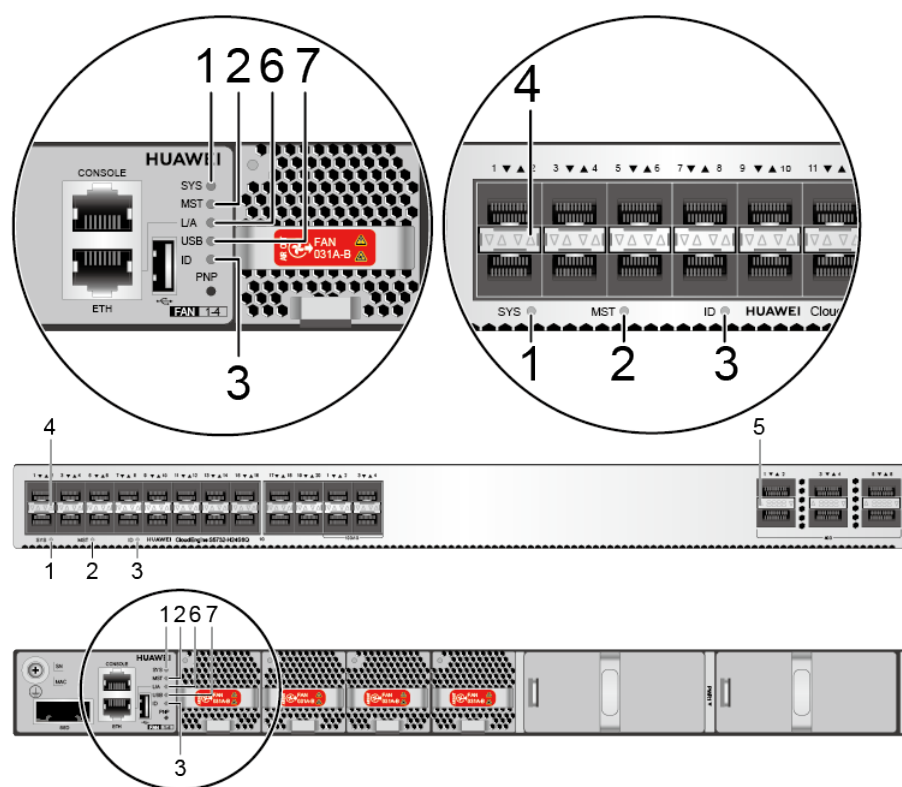


Table 4-1508 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
2	MST	Stack indicator	-	Off	The switch is not the master switch in a stack.
			Green	Blinking	The switch is the master switch in a stack or a standalone switch.
3	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
4	-	Service port indicator (GE/10GE optical port)	-	Off	The port is not connected or has been shut down.
			Green	Steady on	A link has been established on the port.
			-	Off	The port is not sending or receiving data.

No.	Indicator	Name	Color	Status	Description
		<p><b>NOTE</b> Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.</p>	Yellow	Blinking	The port is sending or receiving data.
5	-	Service port indicator (40GE/100GE optical port)	-	Off	The port is not connected or has been shut down.
			Green	Steady on	A link has been established on the port.

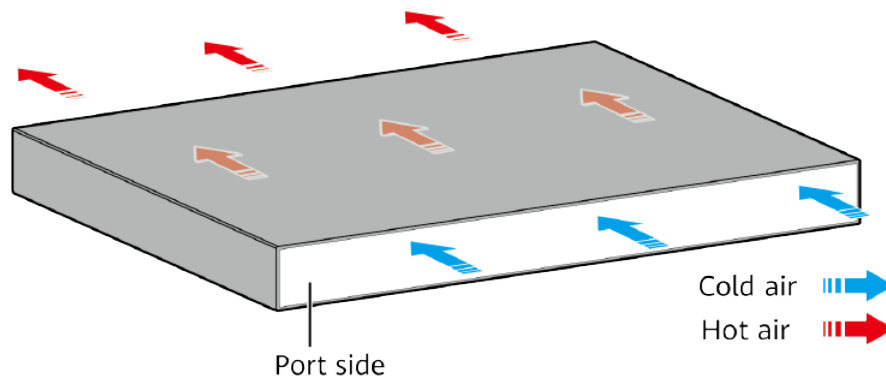
No.	Indicator	Name	Color	Status	Description
		<p><b>NOTE</b> Each optical port has one single-color indicator. Arrowheads show the positions of ports.</p>		Blinking	The port is sending or receiving data.
6	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The Eth port is sending or receiving data.
7	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

## Heat Dissipation

The S5732-H24S6Q uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1509](#) lists technical specifications of the S5732-H24S6Q.

**Table 4-1509** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	2 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	62.27 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	N/A

Item	Description
Power supply surge protection	<ul style="list-style-type: none"> <li>● Using AC power modules: ±6 kV in differential mode, ±6 kV in common mode</li> <li>● Using DC power modules: ±2 kV in differential mode, ±4 kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>● Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>● Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 446.0 mm (1.72 in. x 17.4 in. x 17.6 in.)</li> </ul>
Weight (with packaging)	8.9 kg (19.62 lb)
Stack ports	Any QSFP+ ports
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>● AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>● High-Voltage DC input: 240 V DC</li> <li>● DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>● High-Voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	229 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	126 W

Item	Description
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F). The operating temperature of the switch is -5°C to 40°C (23°F to 104°F) when it uses QSFP-100G-ER4 optical module.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 65 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02353AJS 02353AJS-001 02353AJS-003 02353AJS-004 02353AJS-005

## 4.29.2 S5732-H48S6Q (02353AJU/ 02353AJU-001/02353AJU-003/02353AJU-004)

### Version Mapping

**Table 4-1510** lists the mapping between the S5732-H48S6Q chassis and software versions.

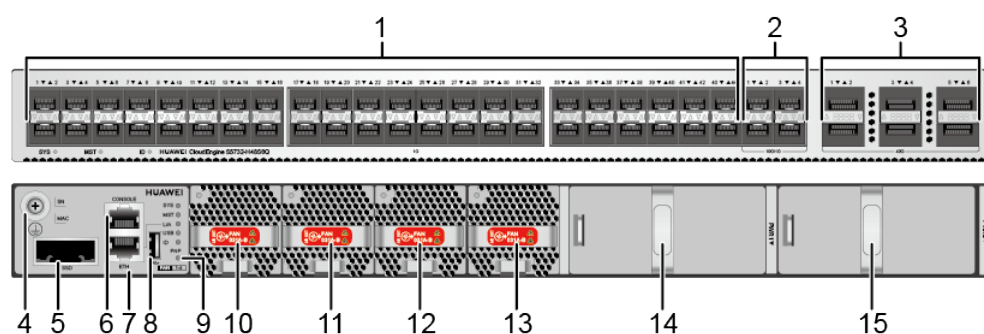


**Table 4-1510** Version mapping

Series	Model	Software Version
S5732-H	S5732-H48S6Q	02353AJU: V200R019C00 and later versions 02353AJU-001: V200R020C10 and later versions 02353AJU-003: V200R021C10SPC500 and later versions (If V200R021C00SPC100 is used, install V200R021SPH011 or a later patch.) 02353AJU-004: V200R021C10SPC600 and later versions (If V200R021C00SPC100 is used, install V200R021SPH013 or a later patch.) <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-581** S5732-H48S6Q appearance



1	Forty-four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"><li>• <b>GE optical module</b></li><li>• <b>GE-CWDM optical module</b></li><li>• <b>GE-DWDM optical module</b></li><li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li></ul>	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"><li>• <b>GE optical module</b></li><li>• <b>GE-CWDM optical module</b></li><li>• <b>GE-DWDM optical module</b></li><li>• <b>GE copper module (100M/1000M auto-sensing)</b></li><li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li><li>• <b>10GE-CWDM optical module</b></li><li>• <b>10GE-DWDM optical module</b></li><li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li><li>• <b>3 m and 10 m SFP+ AOC cables</b></li></ul>
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<p>3</p>	<p>Six 40GE/100GE QSFP+ optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>QSFP+ optical module</b></li> <li>• <b>1 m, 3 m, and 5 m QSFP+ to QSFP+ high-speed copper cables</b></li> <li>• <b>10 m QSFP+ to QSFP+ AOC cable</b></li> <li>• <b>QSFP28 optical module (supported in V200R020C00 and later versions, with a license loaded)</b></li> <li>• <b>1 m QSFP28 to QSFP28 high-speed copper cable (supported in V200R020C00 and later versions, with a license loaded)</b></li> <li>• <b>10 m QSFP28 to QSFP28 AOC cable (supported in V200R020C00 and later versions, with a license loaded)</b></li> <li>• <b>2 m QSFP28 dedicated stack cable (supported in V200R020C10 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>A QSFP+ optical port cannot be split into four 10GE ports, regardless of whether the port uses a QSFP28 or QSFP+ optical module.</p> <p>By default, a QSFP+ optical port is a 40GE port. In V200R020C00 and later versions, a license can be loaded to increase the port rate to 100 Gbit/s. After the license is activated, run the <b>assign port-type 100GE</b> command and restart the switch to configure the port as a 100GE port.</p>	<p>4</p>	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>
<p>5</p>	<p>SSD card slot</p> <p><b>NOTE</b></p> <p>This slot is reserved for future use.</p>	<p>6</p>	<p>One console port</p>
<p>7</p>	<p>One ETH management port</p>	<p>8</p>	<p>One USB port</p>

9	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	1 0	<p>Fan module slot 1</p> <p><b>NOTE</b></p> <p>Applicable fan module: <a href="#">7.5 FAN-031A-B (Fan box(B,FAN panel side exhaust))</a></p>
1 1	<p>Fan module slot 2</p> <p><b>NOTE</b></p> <p>Applicable fan module: <a href="#">7.5 FAN-031A-B (Fan box(B,FAN panel side exhaust))</a></p>	1 2	<p>Fan module slot 3</p> <p><b>NOTE</b></p> <p>Applicable fan module: <a href="#">7.5 FAN-031A-B (Fan box(B,FAN panel side exhaust))</a></p>
1 3	<p>Fan module slot 4</p> <p><b>NOTE</b></p> <p>Applicable fan module: <a href="#">7.5 FAN-031A-B (Fan box(B,FAN panel side exhaust))</a></p>	1 4	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> </ul>
1 5	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> </ul>	-	-

## Port Description

### 1000BASE-X Ethernet Optical Port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission

speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1511](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1511** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

#### 10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1512](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1512** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

#### 40GE QSFP+ optical port

A 40GE QSFP+ optical port sends and receives service traffic at 40 Gbit/s. [Table 4-1513](#) describes the attributes of a QSFP+ optical port.

**Table 4-1513** Attributes of a QSFP+ optical port

Attribute	Description
Connector type	MPO/LC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ba

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1514](#).

**Table 4-1514** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1515](#) describes the attributes of an ETH management port.

**Table 4-1515** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to

the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

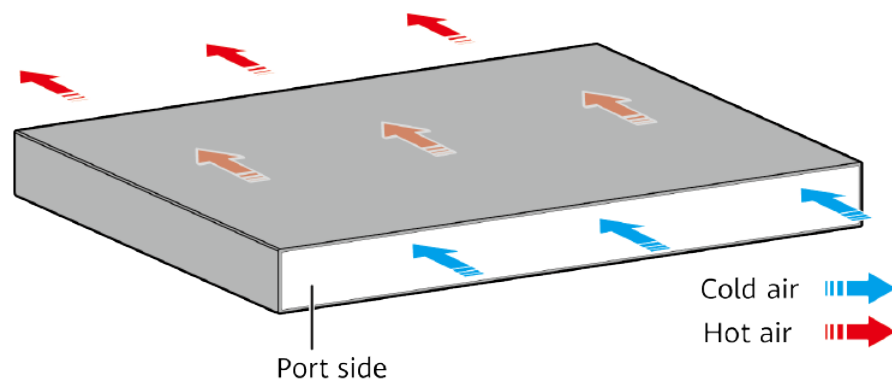
The S5732-H48S6Q has the same types of indicators as the S5732-H24S6Q. For details, see [Indicator Description](#).

## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

## Heat Dissipation

The S5732-H48S6Q uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



#### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1516](#) lists technical specifications of the S5732-H48S6Q.

**Table 4-1516** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	2 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	56.87 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	N/A
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 446.0 mm (1.72 in. x 17.4 in. x 17.6 in.)</li> </ul>
Weight (with packaging)	9.2 kg (20.28 lb)
Stack ports	Any QSFP+ ports
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>



Item	Description
Maximum power consumption (100% throughput, full speed of fans)	255 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	142 W
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F). The operating temperature of the switch is -5°C to 40°C (23°F to 104°F) when it uses QSFP-100G-ER4 optical module.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 65 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02353AJU 02353AJU-001 02353AJU-003 02353AJU-004

### 4.29.3 S5732-H24UM2CC (02353HUC/ 02353HUC-003/02353SJY/ 02353SJY-001/02353SJY-004/02353SJY-010/02353SJY-011/0235 3SJY-014)

#### Version Mapping

**Table 4-1517** lists the mapping between the S5732-H24UM2CC chassis and software versions.

**Table 4-1517** Version mapping

Series	Model	Software Version
S5732-H	S5732-H24UM2CC	<p>02353HUC: Supported in V200R019C10SPC500 and later versions</p> <p>02353SJY: Supported in V200R019C10SPC500 and later versions</p> <p>02353SJY-001: Supported in V200R019C10SPC500 and later versions</p> <p>02353SJY-004: Supported in V200R019C10SPC500 and later versions</p> <p>02353HUC-003: V200R021C10SPC500 and later versions (If V200R021C00SPC100 is used, install V200R021SPH011 or a later patch.)</p> <p>02353SJY-010: V200R021C10SPC500 and later versions (If V200R021C00SPC100 is used, install V200R021SPH011 or a later patch.)</p> <p>02353SJY-011: V200R021C10SPC500 and later versions (If V200R021C00SPC100 is used, install V200R021SPH011 or a later patch.)</p> <p>02353SJY-014: V200R021C10SPC500 and later versions (If V200R021C00SPC100 is used, install V200R021SPH011 or a later patch.)</p> <p><b>NOTE</b> V200R021C01 is not supported.</p>

There are several S5732-H24UM2CC bundles, which consist of different power supplies and ports, as listed in **Table 4-1518**.

**Table 4-1518** S5732-H24UM2CC bundles

Part Number	Description	Remarks
02353HUC 02353HUC-003	S5732-H24UM2CC Premium(24*100M/1G/2.5G/5G/10G Ethernet ports, 4*25GE SFP28 + 2*40GE or 2*100GE QSFP28 ports, 1*expansion slot, PoE++, without power module)	By default, no power supply is configured. By default, multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, 5 Gbit/s, and 10 Gbit/s.
02353SJY 02353SJY-010	S5732-H24UM2CC Base(24*100M/1G Ethernet ports, Optional RTU upgrade to 2.5/5/10G, 4*25GE SFP28 + 2*40GE or 2*100GE QSFP28 ports, 1*expansion slot, PoE++, without power module)	By default, no power supply is configured. By default, multi-GE ports support 100 Mbit/s and 1000 Mbit/s. You can purchase an RTU license to increase the port rate to 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s.
02353SJY-001 02353SJY-011	S5732-H24UM2CC 2.5&10G Bundle(12*100M/1G/2.5G, 12*100M/1G/2.5G/5G/10G Ethernet ports, Optional RTU upgrade to 5/10G, 4*25GE + 2*40GE or 2*100GE, 1*expansion slot, PoE++, 1*1000W AC power)	By default, one 1000 W AC power module is configured. The 2.5GE RTU license for 12 multi-GE ports and the 10GE RTU license for another 12 multi-GE ports have been activated in factory default settings. You can run the <b>assign group-speed</b> command to configure these multi-GE ports as 12 x 2.5GE and 12 x 10GE ports. You can purchase an additional RTU license to upgrade the 2.5GE ports to 5GE or 10GE ports. There is a label on the rear side of the device, which contains the rate "12*2.5GE+12*10GE" supported by the multi-GE ports.

Part Number	Description	Remarks
02353SJY-004 02353SJY-014	S5732-H24UM2CC 10G Bundle(24*100M/1G/2.5G/5G/10G Ethernet ports, 4*25GE SFP28 + 2*40GE or 2*100GE QSFP28 ports, 1*expansion slot, PoE++, 1*1000W AC power)	By default, one 1000 W AC power module is configured.  The 10GE RTU license for 24 multi-GE ports has been activated in factory default settings. You can run the <b>assign group-speed</b> command to configure these multi-GE ports as 24 x 10GE ports.  There is a label on the rear side of the device, which contains the rate "24*10GE" supported by the multi-GE ports.

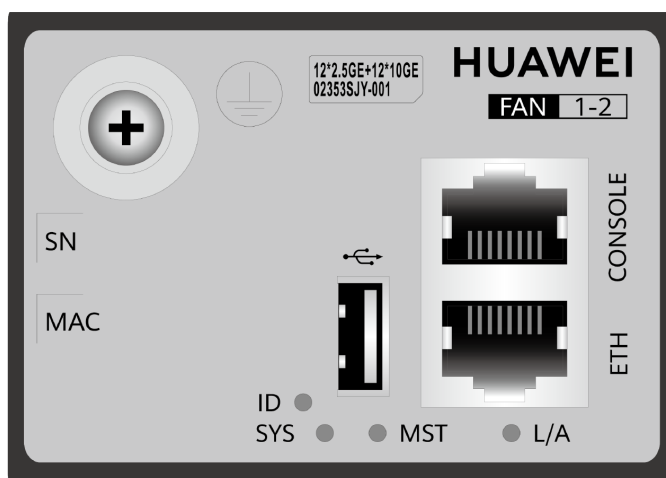
 NOTE

A pre-configured or loaded RTU (right to use) license of a device is bound to the device ESN and cannot be unbound or transferred to other devices.

For details about the RTU licenses supported by the device and how to load them, see the *License Usage Guide*.

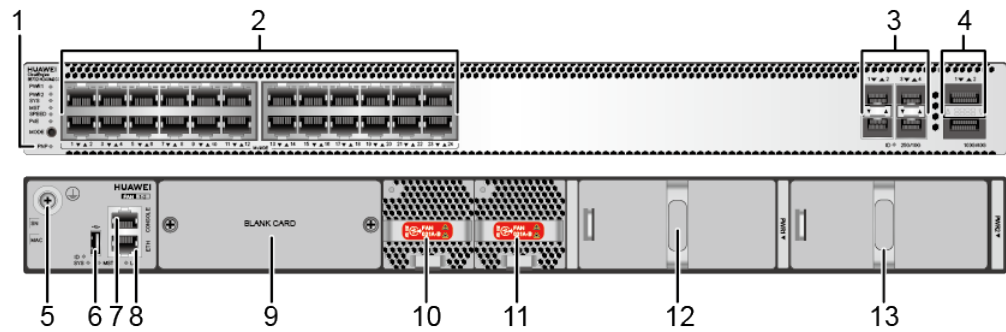
The rate of MultiGE ports can be increased using the RTU license. After the license is activated, you can run the **assign group-speed** command and restart the device to make the configured maximum rate supported by the ports in the MultiGE port group take effect. To check the default rate of MultiGE ports, run the **display device group-speed configuration** command. The **BaseSpeed** field indicates the default rate.

A switch with part number 02353SJY-001 is as an example. The switch has a label on its real panel, which shows the default rate of multi-GE ports on the switch.



## Appearance and Structure

Figure 4-582 S5732-H24UM2CC appearance



<p>1</p> <p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	<p>2</p> <p>Twenty-four 100M/1000M/2.5GE/5GE/10GE BASE-T PoE++ ports (multi-GE ports)</p>
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3	<p>Four 1GE/10GE/25GE SFP28 optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>25GE SFP28 Optical Module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>1 m, 3 m, and 5 m SFP28 high-speed copper cables</b></li> <li>• <b>3 m, 5 m, 7 m, and 10 m SFP28 AOC cables</b></li> </ul>	4	<p>Two 40GE/100GE QSFP28 optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>QSFP+ optical module</b></li> <li>• <b>QSFP28 optical module</b></li> <li>• <b>1 m, 3 m, and 5 m QSFP+ high-speed copper cables</b></li> <li>• <b>10 m QSFP+ AOC cable</b></li> <li>• <b>1 m, 3 m, and 5 m QSFP28 high-speed copper cables</b></li> <li>• <b>10 m QSFP28 AOC cable</b></li> <li>• <b>2 m QSFP28 dedicated stack cable (supported in V200R020C10 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>You can run the <b>set device port-config-mode enable</b> command to change the working mode of SFP28 and QSFP28 optical ports. By default, the working mode of SFP28 and QSFP28 optical ports is "4 x 25GE + 2 x 40GE".</p> <p>If any QSFP28 optical port is configured to work at 100 Gbit/s or split into four 25GE ports, the four SFP28 optical ports become unavailable.</p>
5	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	6	<p>One USB port</p>
7	<p>One console port</p>	8	<p>One ETH management port</p>
9	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Applicable card:</p> <ul style="list-style-type: none"> <li>• <b>S7X08000</b></li> <li>• <b>S7Y08000</b></li> <li>• <b>S7Q02001 (02313UBW)</b> (applicable in V200R022C00 and later versions)</li> <li>• <b>S7Q02001 (02313UBW-002)</b> (applicable in V200R022C00 and later versions)</li> <li>• <b>S7C02000</b> (applicable in V200R022C00 and later versions)</li> </ul>	10	<p>Fan module slot 1</p> <p><b>NOTE</b></p> <p>Applicable fan module: <b>7.5 FAN-031A-B (Fan box(B,FAN panel side exhaust))</b></p>

<p>1 1</p>	<p>Fan module slot 2</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.5 FAN-031A-B (Fan box(B,FAN panel side exhaust))</a></p>	<p>1 2</p>	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a> (applicable in V200R021C10 and later versions)</li> </ul>
<p>1 3</p>	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a> (applicable in V200R021C10 and later versions)</li> </ul>	<p>-</p>	<p>-</p>

## Port Description

### 100M/1000M/2.5GE/5GE/10GE BASE-T port (multi-GE port)

A 100M/1000M/2.5GE/5GE/10GE BASE-T port (multi-GE port) sends and receives service data at 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s, and must use

an **Ethernet cable**. If the 2.5 Gbit/s or 5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category. If the 10 Gbit/s speed is required, the port must use an Ethernet cable of Cat6A F/UTP or higher category. **Table 4-1519** describes the attributes of a 100M/1000M/2.5GE/5GE/10GE BASE-T port.

**Table 4-1519** Attributes of a 100M/1000M/2.5GE/5GE/10GE BASE-T port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3u, IEEE802.3ab, IEEE802.3bz, IEEE802.3an
Working Mode	100/1000/2500/5000/10000 Mbit/s auto-sensing

**Table 4-1520** lists the maximum transmission distances of different cables on multi-GE ports.

**Table 4-1520** Maximum transmission distances of different cables on multi-GE ports

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/1000M	2.5GE	5GE	10GE
Category 5e unshielded twisted pair (Cat5e UTP)	100 m	100 m	<ul style="list-style-type: none"> <li>• 55 m</li> <li>• 100 m (6-a-1 bundle only for the first 30 m)</li> </ul> Not recommended due to high risk	Not supported
Category 5e shielded twisted pair (Cat5e STP)	100 m	100 m	100 m	Not supported
Category 6 unshielded twisted pair (Cat6 UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported



Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/1000M	2.5GE	5GE	10GE
Category 6 shielded twisted pair (Cat6 STP)	100 m	100 m	100 m	Not supported
Category 6A unshielded twisted pair (Cat6A U/UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported
Category 6A foiled/unshielded twisted pair (Cat6A F/UTP)	100 m	100 m	100 m	100 m
Category 6A shielded twisted pair (Cat6A STP)	100 m	100 m	100 m	100 m
Category 7 twisted pair (Cat7)	100 m	100 m	100 m	100 m

 **NOTE**

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

If a port works at a rate of 5 Gbit/s, you are advised not to use unshielded Ethernet cables due to the following causes:

- 802.3bz requires that the ALSNR value for alien crosstalk between Ethernet cables be greater than 0, but the standards for Cat5e and Cat6 unshielded twisted pairs do not specify the required ALSNR value. Therefore, such cables may not meet the crosstalk requirement in 802.3bz, causing severe problems such as continuous packet loss or port flapping may occur.
- According the cabling specification TIA TSB-5021, using Cat5e and Cat6 cables for 5G poses high risks.
- Currently, no clear onsite testing or evaluation method is available for checking whether ALSNR of cables conforms to 802.3bz.

If a port works at a rate of 5 Gbit/s and a Cat6 shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL Class E (+All) or TIA Cat 6 Channel (+All). If a Cat6A shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL2 Class Ea (+All) or TIA Cat6A Channel (+All). Otherwise, serious problems such as continuous packet loss or interface flapping may occur.

If a port works at a rate of 10 Gbit/s and a Cat6A shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL2 Class Ea (+All) or TIA Cat6A Channel (+All). Otherwise, serious problems such as continuous packet loss or interface flapping may occur.

If Cat5e and Cat6 unshielded twisted pairs do not meet the 5G requirement, you are advised to replace them with shielded twisted pairs or reduce the rate of ports to 2.5G.

If Cat5E, Cat6, or Cat6A unshielded twisted pairs are used on electrical ports working at 10 Gbit/s, severe problems such as continuous packet loss or port flapping may occur.

### 1GE/10GE/25GE SFP28 optical port

A 1GE/10GE/25GE SFP28 optical port sends and receives service data at 1 Gbit/s, 10 Gbit/s, or 25 Gbit/s. [Table 4-1521](#) describes the attributes of a 1GE/10GE/25GE SFP28 optical port.

**Table 4-1521** Attributes of a 1GE/10GE/25GE SFP28 optical port

Attribute	Description
Connector Type	LC/PC
Optical port attributes	Depending on the optical module or cable in use
Standards compliance	IEEE802.3z, IEEE802.3ae, and IEEE802.3by
Working mode	<ul style="list-style-type: none"><li>• When a 25GE optical module or cable is connected to a port, the port can automatically adjust its rate to 25 Gbit/s.</li><li>• When a 10GE optical module or cable is connected to a port, the port can automatically adjust its rate to 10 Gbit/s.</li><li>• Before installing a GE optical module or copper module on a port, run the <b>port mode ge</b> command to configure the port to work at 1 Gbit/s.</li></ul>

### 40GE/100GE QSFP28 optical port

A 40GE/100GE QSFP28 optical port sends and receives service traffic at 40 Gbit/s or 100 Gbit/s. [Table 4-1522](#) describes the attributes of a QSFP28 optical port.

**Table 4-1522** Attributes of a QSFP28 optical port

Attribute	Description
Connector type	MPO/LC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ba

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1523](#).

**Table 4-1523** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1524](#) describes the attributes of an ETH management port.

**Table 4-1524** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

**NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

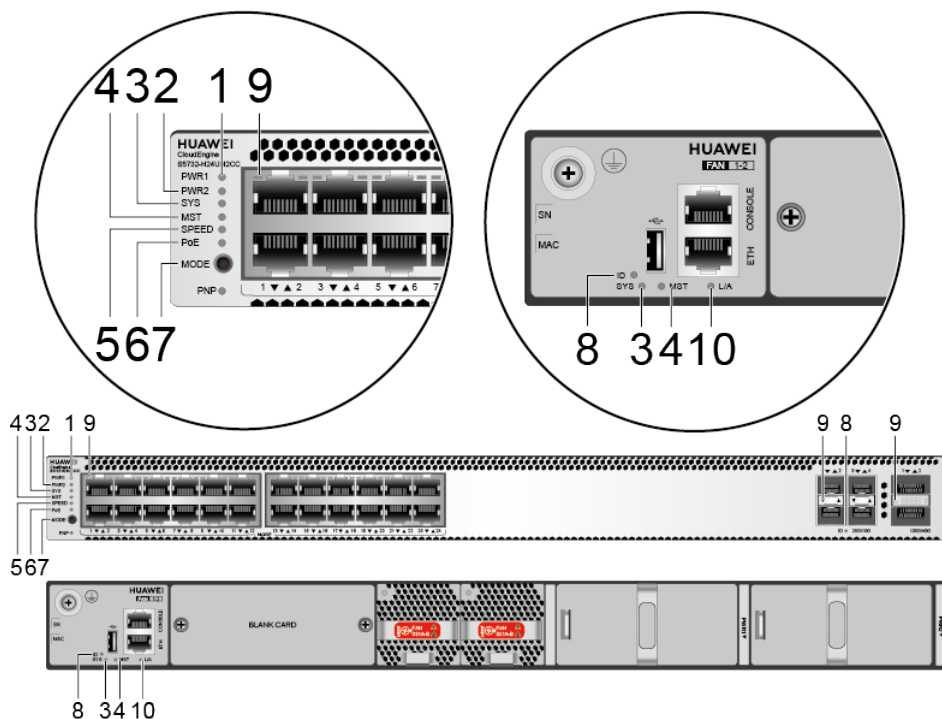
## Indicator Description

**NOTE**

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-583** Indicators on the S5732-H24UM2CC



**Table 4-1525** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
			Red	Steady on	The switch has two power modules installed. An unsupported power module is installed in power module slot 1. <b>NOTE</b> Only the S5732-H48XUM2CC has this indicator status.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>

No.	Indicator	Name	Color	Status	Description
			Red	Steady on	<p>The switch has two power modules installed.</p> <p>An unsupported power module is installed in power module slot 2.</p> <p><b>NOTE</b> Only the S5732-H48XUM2CC has this indicator status.</p>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting or is copying the system software and configuration file from a USB flash drive during a USB-based upgrade.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Yellow	Blinking	The switch has restarted after a successful upgrade using a USB flash drive. You can remove the USB flash drive from the switch.
			Red	Blinking	The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.

No.	Indicator	Name	Color	Status	Description
			Green	Blinking	<ul style="list-style-type: none"><li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li><li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore the status mode.</li></ul>
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p>
8	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1526</a> .		
10	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.



**Table 4-1526** Description of service port indicators in different modes

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
	Yellow	Blinking	The port is sending or receiving data. <b>NOTE</b> Only the S5732-H48XUM2CC has this indicator status.
	Yellow	Steady on	The port is supplying PoE power remotely and is not transmitting data. <b>NOTE</b> This port status is supported by the multi-GE ports on the S5732-H48XUM2CC.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	<ul style="list-style-type: none"> <li>100M/1000M/2.5GE/5GE/10GE BASE-T port: The port is operating at 100 Mbit/s or 1000 Mbit/s.</li> <li>1GE/10GE/25GE SFP28 port: The port is operating at 1 Gbit/s or 10 Gbit/s.</li> <li>40GE/100GE QSFP28 port: The port is operating at 40 Gbit/s.</li> <li>1GE/10GE SFP+ port: The port is operating at 1 Gbit/s.</li> </ul>
	Green	Blinking	<ul style="list-style-type: none"> <li>100M/1000M/2.5GE/5GE/10GE BASE-T port: The port is operating at 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s.</li> <li>1GE/10GE/25GE SFP28 port: The port is operating at 25 Gbit/s.</li> <li>40GE/100GE QSFP28 port: The port is operating at 100 Gbit/s.</li> <li>1GE/10GE SFP+ port: The port is operating at 10 Gbit/s.</li> </ul>
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> <li>The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.</li> <li>The total power consumption of PDs has reached the maximum power of the switch.</li> <li>The manual power management mode is used and the port is not enabled to provide power to the PD.</li> </ul>

## Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1527** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	675 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 22</li> <li>• 802.3bt (60 W per port): 11</li> </ul>
1000 W AC (110 V)	–	580 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 19</li> <li>• 802.3bt (60 W per port): 9</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1440 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 24</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1435 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 23</li> </ul>
600 W AC (220 V)	–	295 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 19</li> <li>• 802.3at (30 W per port): 9</li> <li>• 802.3bt (60 W per port): 4</li> </ul>

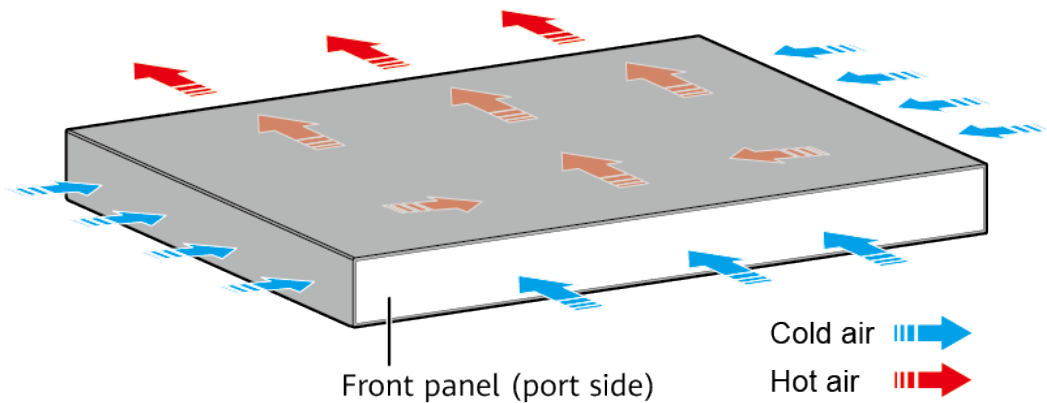
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
600 W AC (220 V)	600 W AC (220 V)	865 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 14</li> </ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1245 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 20</li> </ul>

**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

## Heat Dissipation

The S5732-H24UM2CC uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1528](#) lists technical specifications of the S5732-H24UM2CC.

**Table 4-1528** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	2 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	38.05 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 446.0 mm (1.72 in. x 17.4 in. x 17.6 in.)</li> </ul>
Weight (including package)	Without power modules: 8 kg (17.64 lb) Including one power module: 9.1 kg (20.06 lb)
Stack ports	Any Ethernet electrical ports (10GE), optical ports on the front panel (25GE/40GE/100GE), or optical ports on the card (10GE/25GE/40GE/100GE)
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>

Item	Description
Maximum voltage range	<ul style="list-style-type: none"><li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li><li>High-Voltage DC input: 190 V DC to 290 V DC</li><li>DC input: -38.4 V DC to -72 V DC</li></ul>
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"><li>Not providing the PoE function: 285 W (without card)</li><li>100% PoE loads: 1933 W (PoE: 1440 W, without card)</li></ul>
Typical power consumption (30% of traffic load, tested according to ATIS standard)	161 W (without card)
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F). The operating temperature of the switch is -5°C to 40°C (23°F to 104°F) when it uses QSFP-100G-ER4 optical module.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 59.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>EMC certification</li><li>Safety certification</li><li>Manufacturing certification</li></ul>

Item	Description
Part number	02353HUC 02353HUC-003 02353SJY 02353SJY-001 02353SJY-004 02353SJY-010 02353SJY-011 02353SJY-014

## 4.29.4 S5732-H24UM2CC (02353SJY-020/02353SJY-021/02353SJY-024)

### Version Mapping

[Table 4-1529](#) lists the mapping between the S5732-H24UM2CC chassis and software versions.

**Table 4-1529** Version mapping

Series	Model	Software Version
S5732-H	S5732-H24UM2CC	02353SJY-020: Supported in V200R022C00 and later versions 02353SJY-021: Supported in V200R022C00 and later versions 02353SJY-024: Supported in V200R022C00 and later versions

There are several S5732-H24UM2CC bundles, which consist of different power supplies and ports, as listed in [Table 4-1530](#).

**Table 4-1530** S5732-H24UM2CC bundles

Part Number	Description	Remarks
02353SJY-020	S5732-H24UM2CC Base(24*100M/1G Ethernet ports, Optional RTU upgrade to 2.5/5/10G, 4*25GE SFP28, 2*100GE QSFP28 ports, 1*expansion slot, PoE++, without power module)	<p>By default, no power supply is configured.</p> <p>By default, multi-GE ports support 100 Mbit/s and 1000 Mbit/s. You can purchase an RTU license to increase the port rate to 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s.</p>
02353SJY-021	S5732-H24UM2CC 2.5&10G Bundle(12*100M/1G/2.5G, 12*100M/1G/2.5G/5G/10G Ethernet ports, Optional RTU upgrade to 5/10G, 4*25GE SFP28, 2*100GE QSFP28 ports, 1*expansion slot, PoE++, with AC power supply)	<p>By default, one 1000 W AC power module is configured.</p> <p>By default, the first 12 multi-GE ports support 100 Mbit/s, 1000 Mbit/s, and 2.5 Gbit/s. You can purchase an RTU license to increase the port rate to 5 Gbit/s or 10 Gbit/s.</p> <p>By default, the last 12 multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, 5 Gbit/s, and 10 Gbit/s.</p> <p>There is a label on the rear side of the device, which contains the default rate "12*2.5GE +12*10GE" supported by the multi-GE ports.</p>
02353SJY-024	S5732-H24UM2CC 10G Bundle(24*100M/1G/2.5G/5G/10G Ethernet ports, 4*25GE SFP28, 2*100GE QSFP28 ports, 1*expansion slot, PoE++, with AC power supply)	<p>By default, one 1000 W AC power module is configured.</p> <p>By default, multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, 5 Gbit/s, and 10 Gbit/s.</p> <p>There is a label on the rear side of the device, which contains the default rate "24*10GE" supported by the multi-GE ports.</p>



**NOTE**

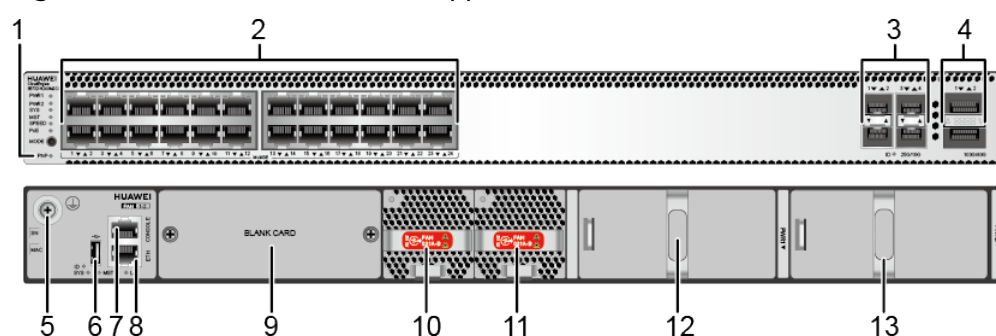
A pre-configured or loaded RTU (right to use) license of a device is bound to the device ESN and cannot be unbound or transferred to other devices.

For details about the RTU licenses supported by the device and how to load them, see the *License Usage Guide*.

The rate of MultiGE ports can be increased using the RTU license. After the license is activated, you can run the **assign group-speed** command and restart the device to make the configured maximum rate supported by the ports in the MultiGE port group take effect. To check the default rate of MultiGE ports, run the **display device group-speed configuration** command. The **BaseSpeed** field indicates the default rate.

## Appearance and Structure

Figure 4-584 S5732-H24UM2CC appearance



<p>1</p> <p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	<p>2</p> <p>Twenty-four 100M/1000M/2.5GE/5GE/10GE BASE-T PoE++ ports (multi-GE ports)</p>
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3	<p>Four 10GE/25GE SFP28 optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>25GE SFP28 Optical Module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>1 m and 3 m SFP28 high-speed copper cables</b></li> <li>• <b>3 m, 5 m, 7 m, and 10 m SFP28 AOC cables</b></li> </ul>	4	<p>Two 40GE/100GE QSFP28 optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>QSFP+ optical module</b></li> <li>• <b>QSFP28 optical module</b></li> <li>• <b>1 m, 3 m, and 5 m QSFP+ to QSFP+ high-speed copper cables</b></li> <li>• <b>10 m QSFP+ to QSFP+ AOC cable</b></li> <li>• <b>1 m and 3 m QSFP28 to QSFP28 high-speed copper cables</b></li> <li>• <b>10 m QSFP28 to QSFP28 AOC cable</b></li> <li>• <b>2 m QSFP28 dedicated stack cable</b></li> </ul> <p><b>NOTE</b></p> <p>A QSFP28 optical port cannot be split into four 10GE ports, regardless of whether the port uses a QSFP28 or QSFP+ optical module.</p> <p>The default rate of a QSFP28 optical port is 100 Gbit/s. When a QSFP+ optical module or QSFP+ cable is used, the rate can be auto-sensing to 40 Gbit/s.</p>
5	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	6	<p>One USB port</p>
7	<p>One console port</p>	8	<p>One ETH management port</p>
9	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Applicable card:</p> <ul style="list-style-type: none"> <li>• <b>S7X08000</b></li> <li>• <b>S7Y08000</b></li> <li>• <b>S7Q02001 (02313UBW)</b></li> <li>• <b>S7Q02001 (02313UBW-002)</b></li> <li>• <b>S7C02000</b></li> </ul>	10	<p>Fan module slot 1</p> <p><b>NOTE</b></p> <p>Applicable fan module: <b>7.5 FAN-031A-B (Fan box(B,FAN panel side exhaust))</b></p>

1 1	Fan module slot 2  <b>NOTE</b> Applicable fan module: <a href="#">7.5 FAN-031A-B (Fan box(B,FAN panel side exhaust))</a>	1 2	Power module slot 1  <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a></li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a></li> </ul>
1 3	Power module slot 2  <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a></li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a></li> </ul>	-	-

## Port Description

### 100M/1000M/2.5GE/5GE/10GE BASE-T port (multi-GE port)

A 100M/1000M/2.5GE/5GE/10GE BASE-T port (multi-GE port) sends and receives service data at 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s, and must use an **Ethernet cable**. If the 2.5 Gbit/s or 5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category. If the 10 Gbit/s speed is required, the port must use an Ethernet cable of Cat6A F/UTP or higher category. [Table 4-1531](#) describes the attributes of a 100M/1000M/2.5GE/5GE/10GE BASE-T port.

**Table 4-1531** Attributes of a 100M/1000M/2.5GE/5GE/10GE BASE-T port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3u, IEEE802.3ab, IEEE802.3bz, IEEE802.3an
Working Mode	100/1000/2500/5000/10000 Mbit/s auto-sensing

**Table 4-1532** lists the maximum transmission distances of different cables on multi-GE ports.

**Table 4-1532** Maximum transmission distances of different cables on multi-GE ports

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/1000M	2.5GE	5GE	10GE
Category 5e unshielded twisted pair (Cat5e UTP)	100 m	100 m	<ul style="list-style-type: none"> <li>• 55 m</li> <li>• 100 m (6-a-1 bundle only for the first 30 m)</li> </ul> Not recommended due to high risk	Not supported
Category 5e shielded twisted pair (Cat5e STP)	100 m	100 m	100 m	Not supported
Category 6 unshielded twisted pair (Cat6 UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported
Category 6 shielded twisted pair (Cat6 STP)	100 m	100 m	100 m	Not supported

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/ 1000M	2.5GE	5GE	10GE
Category 6A unshielded twisted pair (Cat6A U/UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported
Category 6A foiled/unshielded twisted pair (Cat6A F/UTP)	100 m	100 m	100 m	100 m
Category 6A shielded twisted pair (Cat6A STP)	100 m	100 m	100 m	100 m
Category 7 twisted pair (Cat7)	100 m	100 m	100 m	100 m

 **NOTE**

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

If a port works at a rate of 5 Gbit/s, you are advised not to use unshielded Ethernet cables due to the following causes:

- 802.3bz requires that the ALSNR value for alien crosstalk between Ethernet cables be greater than 0, but the standards for Cat5e and Cat6 unshielded twisted pairs do not specify the required ALSNR value. Therefore, such cables may not meet the crosstalk requirement in 802.3bz, causing severe problems such as continuous packet loss or port flapping may occur.
- According the cabling specification TIA TSB-5021, using Cat5e and Cat6 cables for 5G poses high risks.
- Currently, no clear onsite testing or evaluation method is available for checking whether ALSNR of cables conforms to 802.3bz.

If a port works at a rate of 5 Gbit/s and a Cat6 shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL Class E (+All) or TIA Cat 6 Channel (+All). If a Cat6A shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL2 Class Ea (+All) or TIA Cat6A Channel (+All). Otherwise, serious problems such as continuous packet loss or interface flapping may occur.

If a port works at a rate of 10 Gbit/s and a Cat6A shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL2 Class Ea (+All) or TIA Cat6A Channel (+All). Otherwise, serious problems such as continuous packet loss or interface flapping may occur.

If Cat5e and Cat6 unshielded twisted pairs do not meet the 5G requirement, you are advised to replace them with shielded twisted pairs or reduce the rate of ports to 2.5G.

If Cat5E, Cat6, or Cat6A unshielded twisted pairs are used on electrical ports working at 10 Gbit/s, severe problems such as continuous packet loss or port flapping may occur.

**10GE/25GE SFP28 optical port**

A 10GE/25GE SFP28 optical port sends and receives service data at 10 Gbit/s, or 25 Gbit/s. [Table 4-1533](#) describes the attributes of a 10GE/25GE SFP28 optical port.

**Table 4-1533** Attributes of a 10GE/25GE SFP28 optical port

Attribute	Description
Connector Type	LC/PC
Optical port attributes	Depending on the optical module or cable in use
Standards compliance	IEEE802.3z, IEEE802.3ae, and IEEE802.3by
Working mode	<ul style="list-style-type: none"><li>When a 25GE optical module or cable is connected to a port, the port can automatically adjust its rate to 25 Gbit/s.</li><li>When a 10GE optical module or cable is connected to a port, the port can automatically adjust its rate to 10 Gbit/s.</li></ul>

#### 40GE/100GE QSFP28 optical port

A 40GE/100GE QSFP28 optical port sends and receives service traffic at 40 Gbit/s or 100 Gbit/s. [Table 4-1534](#) describes the attributes of a QSFP28 optical port.

**Table 4-1534** Attributes of a QSFP28 optical port

Attribute	Description
Connector type	MPO/LC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ba

#### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1535](#).

**Table 4-1535** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1536](#) describes the attributes of an ETH management port.

**Table 4-1536** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

**NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

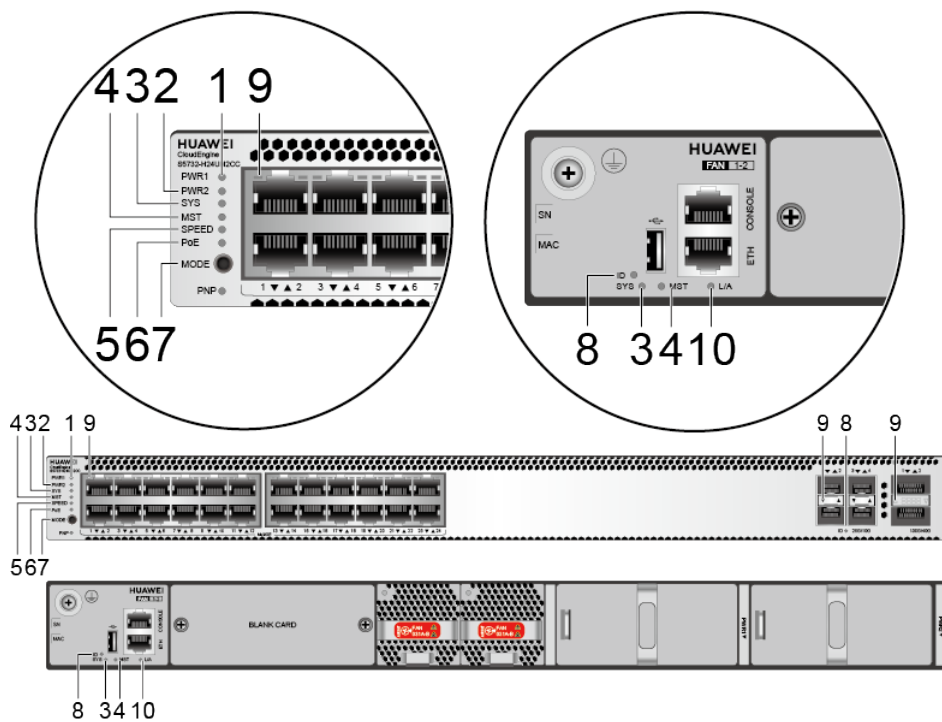
## Indicator Description

**NOTE**

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-585** Indicators on the S5732-H24UM2CC





**Table 4-1537** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>A power module is available in this slot but it is not connected to a power source.</li> <li>The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting or is copying the system software and configuration file from a USB flash drive during a USB-based upgrade.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Yellow	Blinking	The switch has restarted after a successful upgrade using a USB flash drive. You can remove the USB flash drive from the switch.
			Red	Blinking	The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"><li>• If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li><li>• If you are changing the indicator mode: The stack mode is not selected.</li></ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.

No.	Indicator	Name	Color	Status	Description
			Green	Blinking	<ul style="list-style-type: none"><li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li><li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore the status mode.</li></ul>
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p>
8	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.

No.	Indicator	Name	Color	Status	Description
9	-	Service port indicator (one indicator for each port)	Electrical port: The indicator in the upper left corner of a port indicates the indicator of a port at the top, and the indicator in the upper right corner indicates the indicator of a port at the bottom.  Optical port: Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1538</a> .
10	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.

**Table 4-1538** Description of service port indicators in different modes

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.

Display Mode	Color	Status	Description
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	<ul style="list-style-type: none"> <li>100M/1000M/2.5GE/5GE/10GE BASE-T port: The port is operating at 100 Mbit/s or 1000 Mbit/s.</li> <li>10GE/25GE SFP28 port: The port is operating at 10 Gbit/s.</li> <li>40GE/100GE QSFP28 port: The port is operating at 40 Gbit/s.</li> </ul>
	Green	Blinking	<ul style="list-style-type: none"> <li>100M/1000M/2.5GE/5GE/10GE BASE-T port: The port is operating at 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s.</li> <li>10GE/25GE SFP28 port: The port is operating at 25 Gbit/s.</li> <li>40GE/100GE QSFP28 port: The port is operating at 100 Gbit/s.</li> </ul>
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.

Display Mode	Color	Status	Description
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.

## Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1539** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	737 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 12</li> <li>● 802.3bt (90 W per port): 8</li> </ul>
1000 W AC (110 V)	–	642 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 21</li> <li>● 802.3bt (60 W per port): 10</li> <li>● 802.3bt (90 W per port): 7</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1687 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 24</li> <li>● 802.3bt (90 W per port): 18</li> </ul>

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1497 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 24</li><li>• 802.3at (30 W per port): 24</li><li>• 802.3bt (60 W per port): 24</li><li>• 802.3bt (90 W per port): 16</li></ul>
600 W AC (220 V)	-	357 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 23</li><li>• 802.3at (30 W per port): 11</li><li>• 802.3bt (60 W per port): 5</li><li>• 802.3bt (90 W per port): 3</li></ul>
600 W AC (220 V)	600 W AC (220 V)	927 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 24</li><li>• 802.3at (30 W per port): 24</li><li>• 802.3bt (60 W per port): 15</li><li>• 802.3bt (90 W per port): 10</li></ul>
600 W AC (110 V)	600 W AC (110 V)	357 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 23</li><li>• 802.3at (30 W per port): 11</li><li>• 802.3bt (60 W per port): 5</li><li>• 802.3bt (90 W per port): 3</li></ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1307 W	<ul style="list-style-type: none"><li>• 802.3af (15.4 W per port): 24</li><li>• 802.3at (30 W per port): 24</li><li>• 802.3bt (60 W per port): 21</li><li>• 802.3bt (90 W per port): 14</li></ul>

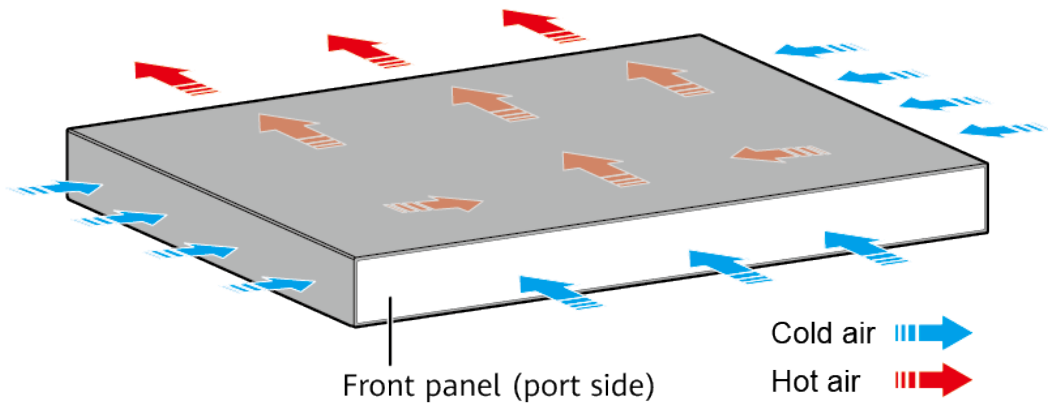


**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

## Heat Dissipation

The S5732-H24UM2CC uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1540](#) lists technical specifications of the S5732-H24UM2CC.

**Table 4-1540** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	2 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	51.4 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV

Item	Description
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 446.0 mm (1.72 in. x 17.4 in. x 17.6 in.)</li> </ul>
Weight (including package)	Without power modules: 8.88 kg (19.58 lb) Including one power module: 9.92 kg (21.87 lb)
Stack ports	Any Ethernet electrical ports (10GE), optical ports on the front panel (25GE/40GE/100GE), or optical ports on the card (10GE/25GE/40GE/100GE)
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 241 W (without card)</li> <li>100% PoE loads: 2011 W (PoE: 1687 W, without card)</li> </ul>
Typical power consumption (30% of traffic load, tested according to ATIS standard)	161 W (without card)

Item	Description
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F). The operating temperature of the switch is -5°C to 40°C (23°F to 104°F) when it uses QSFP-100G-ER4 optical module.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	<ul style="list-style-type: none"> <li>• Dual AC 600 W, 30% load: 49.2 dBA</li> <li>• Dual AC 1000 W, 30% load: 51.2 dBA</li> <li>• Dual-DC 1000 W, 30% load: 51.2 dBA</li> </ul>
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02353SJY-020 02353SJY-021 02353SJY-024

#### 4.29.5 S5732-H48UM2CC (02353HUB/ 02353HUB-002/02353SJT/ 02353SJT-001/02353SJT-003/02353SJT-004/02353SJT-010/0235 3SJT-011/02353SJT-013/02353SJT-014)

#### Version Mapping

[Table 4-1541](#) lists the mapping between the S5732-H48UM2CC chassis and software versions.

**Table 4-1541** Version mapping

Series	Model	Software Version
S5732-H	S5732-H48UM2CC	02353HUB: Supported in V200R019C10SPC500 and later versions 02353HUB-002: V200R021C10SPC500 and later versions (If V200R021C00SPC100 is used, install V200R021SPH011 or a later patch.) 02353SJT: Supported in V200R019C10SPC500 and later versions 02353SJT-001: Supported in V200R019C10SPC500 and later versions 02353SJT-003: Supported in V200R019C10SPC500 and later versions 02353SJT-004: Supported in V200R019C10SPC500 and later versions 02353SJT-010: V200R021C10SPC500 and later versions (If V200R021C00SPC100 is used, install V200R021SPH011 or a later patch.) 02353SJT-011: V200R021C10SPC500 and later versions (If V200R021C00SPC100 is used, install V200R021SPH011 or a later patch.) 02353SJT-013: V200R021C10SPC500 and later versions (If V200R021C00SPC100 is used, install V200R021SPH011 or a later patch.) 02353SJT-014: V200R021C10SPC500 and later versions (If V200R021C00SPC100 is used, install V200R021SPH011 or a later patch.) <b>NOTE</b> V200R021C01 is not supported.

There are several S5732-H48UM2CC bundles, which consists of different power supplies and ports, as listed in [Table 4-1542](#).

**Table 4-1542** S5732-H48UM2CC bundles

Part Number	Description	Remarks
02353HUB 02353HUB-002	S5732-H48UM2CC Premium(48*100M/1G/2.5G/5G/10G Ethernet ports, 4*25GE SFP28 + 2*40GE ports or 2*100GE QSFP28 ports, 1*expansion slot, PoE++, without power module)	By default, no power supply is configured. By default, multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, 5 Gbit/s, and 10 Gbit/s.
02353SJT 02353SJT-010	S5732-H48UM2CC Base(48*100M/1G Ethernet ports,Optional RTU upgrade to 2.5/5/10G, 4*25GE SFP28 + 2*40GE or 2*100GE QSFP28 ports, 1*expansion slot, PoE++, without power module)	By default, no power supply is configured. By default, multi-GE ports support 100 Mbit/s and 1000 Mbit/s. You can purchase an RTU license to increase the port rate to 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s.
02353SJT-001 02353SJT-011	S5732-H48UM2CC 2.5&10G Bundle(36*100M/1G/2.5G, 12*100M/1G/2.5G/5G/10G Ethernet ports, Optional RTU upgrade to 5/10G, 4*25GE + 2*40GE or 2*100GE, 1*expansion slot, PoE++, 1*1000W AC power)	By default, one 1000 W AC power module is configured. The 2.5GE RTU license for 36 multi-GE ports and the 10GE RTU license for another 12 multi-GE ports have been activated in factory default settings. You can run the <b>assign group-speed</b> command to configure these multi-GE ports as 36 x 2.5GE and 12 x 10GE ports. You can purchase an additional RTU license to upgrade the 2.5GE ports to 5GE or 10GE ports. There is a label on the rear side of the device, which contains the rate "36*2.5GE+12*10GE" supported by the multi-GE ports.

Part Number	Description	Remarks
02353SJT-003 02353SJT-013	S5732-H48UM2CC 5G Bundle(48*100M/1G/2.5G/5G Ethernet ports, Optional RTU upgrade to 10G, 4*25GE SFP28 + 2*40GE or 2*100GE QSFP28 ports, 1*expansion slot, PoE++, 1*1000W AC power)	<p>By default, one 1000 W AC power module is configured.</p> <p>The 5GE RTU license for 48 multi-GE ports has been activated in factory default settings. You can run the <b>assign group-speed</b> command to configure these multi-GE ports as 48 x 5GE ports. You can purchase an additional RTU license to upgrade the 5GE ports to 10GE ports.</p> <p>There is a label on the rear side of the device, which contains the rate "48*5GE" supported by the multi-GE ports.</p>
02353SJT-004 02353SJT-014	S5732-H48UM2CC 10G Bundle(48*100M/1G/2.5G/5G/10G Ethernet ports, 4*25GE SFP28 + 2*40GE or 2*100GE QSFP28 ports, 1*expansion slot, PoE++, 1*1000W AC power)	<p>By default, one 1000 W AC power module is configured.</p> <p>The 10GE RTU license for 48 multi-GE ports has been activated in factory default settings. You can run the <b>assign group-speed</b> command to configure these multi-GE ports as 48 x 10GE ports.</p> <p>There is a label on the rear side of the device, which contains the rate "48*10GE" supported by the multi-GE ports.</p>

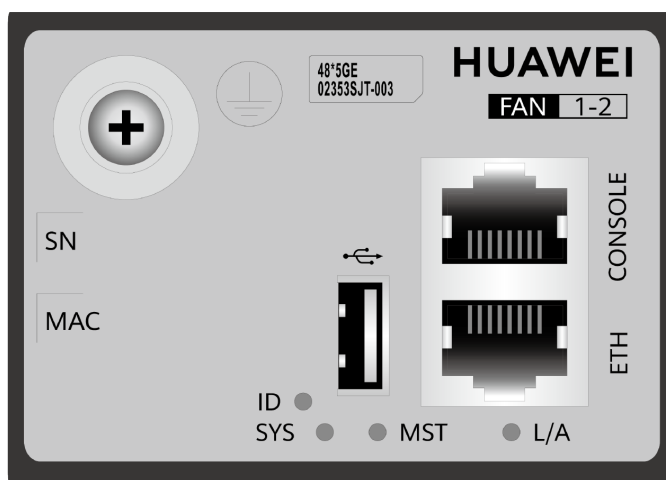
**NOTE**

A pre-configured or loaded RTU (right to use) license of a device is bound to the device ESN and cannot be unbound or transferred to other devices.

For details about the RTU licenses supported by the device and how to load them, see the *License Usage Guide*.

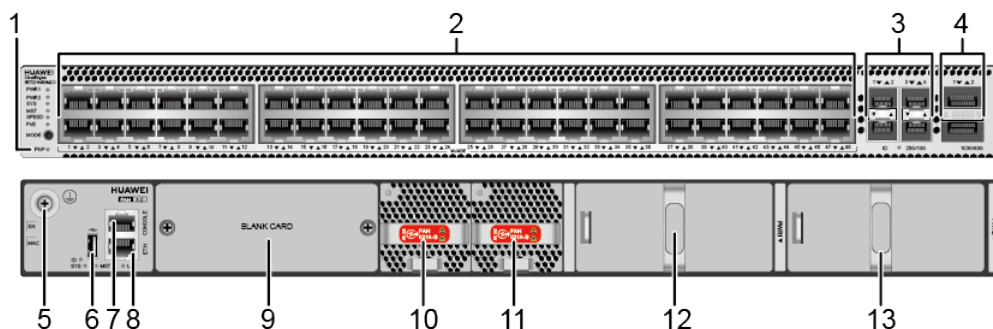
The rate of MultiGE ports can be increased using the RTU license. After the license is activated, you can run the **assign group-speed** command and restart the device to make the configured maximum rate supported by the ports in the MultiGE port group take effect. To check the default rate of MultiGE ports, run the **display device group-speed configuration** command. The **BaseSpeed** field indicates the default rate.

A switch with part number 02353SJT-003 is as an example. The switch has a label on its real panel, which shows the default rate of multi-GE ports on the switch.



## Appearance and Structure

Figure 4-586 S5732-H48UM2CC appearance



1	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	2	<p>Forty-eight 100M/1000M/2.5GE/5GE/10GE BASE-T PoE++ ports (multi-GE ports)</p>
3	<p>Four 1GE/10GE/25GE SFP28 optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>25GE SFP28 Optical Module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>1 m, 3 m, and 5 m SFP28 high-speed copper cables</b></li> <li>• <b>3 m, 5 m, 7 m, and 10 m SFP28 AOC cables</b></li> </ul>	4	<p>Two 40GE/100GE QSFP28 optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>QSFP+ optical module</b></li> <li>• <b>QSFP28 optical module</b></li> <li>• <b>1 m, 3 m, and 5 m QSFP+ high-speed copper cables</b></li> <li>• <b>10 m QSFP+ AOC cable</b></li> <li>• <b>1 m, 3 m, and 5 m QSFP28 high-speed copper cables</b></li> <li>• <b>10 m QSFP28 AOC cable</b></li> <li>• <b>2 m QSFP28 dedicated stack cable (supported in V200R020C10 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>You can run the <b>set device port-config-mode enable</b> command to change the working mode of SFP28 and QSFP28 optical ports. By default, the working mode of SFP28 and QSFP28 optical ports is "4 x 25GE + 2 x 40GE".</p> <p>If any QSFP28 optical port is configured to work at 100 Gbit/s or split into four 25GE ports, the four SFP28 optical ports become unavailable.</p>
5	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>	6	<p>One USB port</p>
7	<p>One console port</p>	8	<p>One ETH management port</p>



9	Rear card slot  <b>NOTE</b> Applicable card: <ul style="list-style-type: none"> <li>• <b>S7X08000</b></li> <li>• <b>S7Y08000</b></li> <li>• <b>S7Q02001 (02313UBW)</b> (applicable in V200R022C00 and later versions)</li> <li>• <b>S7Q02001 (02313UBW-002)</b> (applicable in V200R022C00 and later versions)</li> <li>• <b>S7C02000</b> (applicable in V200R022C00 and later versions)</li> </ul>	1 0	Fan module slot 1  <b>NOTE</b> Applicable fan module: <b>7.5 FAN-031A-B (Fan box(B,FAN panel side exhaust))</b>
1 1	Fan module slot 2  <b>NOTE</b> Applicable fan module: <b>7.5 FAN-031A-B (Fan box(B,FAN panel side exhaust))</b>	1 2	Power module slot 1  <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <b>5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</b></li> <li>• <b>5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</b> (applicable in V200R019C10 and later versions)</li> <li>• <b>5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</b> (applicable in V200R020C10 and later versions)</li> <li>• <b>5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</b> (applicable in V200R021C00 and later versions)</li> <li>• <b>5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</b> (applicable in V200R021C10 and later versions)</li> </ul>

1 3	Power module slot 2  <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a> (applicable in V200R021C10 and later versions)</li> </ul>	-	-
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## Port Description

### 100M/1000M/2.5GE/5GE/10GE BASE-T port (multi-GE port)

A 100M/1000M/2.5GE/5GE/10GE BASE-T port (multi-GE port) sends and receives service data at 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s, and must use an [Ethernet cable](#). If the 2.5 Gbit/s or 5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category. If the 10 Gbit/s speed is required, the port must use an Ethernet cable of Cat6A F/UTP or higher category. [Table 4-1543](#) describes the attributes of a 100M/1000M/2.5GE/5GE/10GE BASE-T port.

**Table 4-1543** Attributes of a 100M/1000M/2.5GE/5GE/10GE BASE-T port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3u, IEEE802.3ab, IEEE802.3bz, IEEE802.3an
Working Mode	100/1000/2500/5000/10000 Mbit/s auto-sensing

[Table 4-1544](#) lists the maximum transmission distances of different cables on multi-GE ports.

**Table 4-1544** Maximum transmission distances of different cables on multi-GE ports

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/1000M	2.5GE	5GE	10GE
Category 5e unshielded twisted pair (Cat5e UTP)	100 m	100 m	<ul style="list-style-type: none"> <li>• 55 m</li> <li>• 100 m (6-a-1 bundle only for the first 30 m)</li> </ul> Not recommended due to high risk	Not supported
Category 5e shielded twisted pair (Cat5e STP)	100 m	100 m	100 m	Not supported
Category 6 unshielded twisted pair (Cat6 UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported
Category 6 shielded twisted pair (Cat6 STP)	100 m	100 m	100 m	Not supported
Category 6A unshielded twisted pair (Cat6A U/UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported
Category 6A foiled/unshielded twisted pair (Cat6A F/UTP)	100 m	100 m	100 m	100 m
Category 6A shielded twisted pair (Cat6A STP)	100 m	100 m	100 m	100 m
Category 7 twisted pair (Cat7)	100 m	100 m	100 m	100 m

 **NOTE**

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

If a port works at a rate of 5 Gbit/s, you are advised not to use unshielded Ethernet cables due to the following causes:

- 802.3bz requires that the ALSNR value for alien crosstalk between Ethernet cables be greater than 0, but the standards for Cat5e and Cat6 unshielded twisted pairs do not specify the required ALSNR value. Therefore, such cables may not meet the crosstalk requirement in 802.3bz, causing severe problems such as continuous packet loss or port flapping may occur.
- According the cabling specification TIA TSB-5021, using Cat5e and Cat6 cables for 5G poses high risks.
- Currently, no clear onsite testing or evaluation method is available for checking whether ALSNR of cables conforms to 802.3bz.

If a port works at a rate of 5 Gbit/s and a Cat6 shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL Class E (+All) or TIA Cat 6 Channel (+All). If a Cat6A shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL2 Class Ea (+All) or TIA Cat6A Channel (+All). Otherwise, serious problems such as continuous packet loss or interface flapping may occur.

If a port works at a rate of 10 Gbit/s and a Cat6A shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL2 Class Ea (+All) or TIA Cat6A Channel (+All). Otherwise, serious problems such as continuous packet loss or interface flapping may occur.

If Cat5e and Cat6 unshielded twisted pairs do not meet the 5G requirement, you are advised to replace them with shielded twisted pairs or reduce the rate of ports to 2.5G.

If Cat5E, Cat6, or Cat6A unshielded twisted pairs are used on electrical ports working at 10 Gbit/s, severe problems such as continuous packet loss or port flapping may occur.

**1GE/10GE/25GE SFP28 optical port**

A 1GE/10GE/25GE SFP28 optical port sends and receives service data at 1 Gbit/s, 10 Gbit/s, or 25 Gbit/s. [Table 4-1521](#) describes the attributes of a 1GE/10GE/25GE SFP28 optical port.

**Table 4-1545** Attributes of a 1GE/10GE/25GE SFP28 optical port

Attribute	Description
Connector Type	LC/PC
Optical port attributes	Depending on the optical module or cable in use
Standards compliance	IEEE802.3z, IEEE802.3ae, and IEEE802.3by

Attribute	Description
Working mode	<ul style="list-style-type: none"> <li>When a 25GE optical module or cable is connected to a port, the port can automatically adjust its rate to 25 Gbit/s.</li> <li>When a 10GE optical module or cable is connected to a port, the port can automatically adjust its rate to 10 Gbit/s.</li> <li>Before installing a GE optical module or copper module on a port, run the <b>port mode ge</b> command to configure the port to work at 1 Gbit/s.</li> </ul>

### 40GE/100GE QSFP28 optical port

A 40GE/100GE QSFP28 optical port sends and receives service traffic at 40 Gbit/s or 100 Gbit/s. [Table 4-1546](#) describes the attributes of a QSFP28 optical port.

**Table 4-1546** Attributes of a QSFP28 optical port

Attribute	Description
Connector type	MPO/LC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ba

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1547](#).

**Table 4-1547** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1548](#) describes the attributes of an ETH management port.

**Table 4-1548** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5732-H48UM2CC has the same types of indicators as the S5732-H24UM2CC. For details, see [Indicator Description](#).

## Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1549** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	621 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 40</li> <li>● 802.3at (30 W per port): 20</li> <li>● 802.3bt (60 W per port): 10</li> </ul>
1000 W AC (110 V)	–	526 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 34</li> <li>● 802.3at (30 W per port): 17</li> <li>● 802.3bt (60 W per port): 8</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1571 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 48</li> <li>● 802.3bt (60 W per port): 26</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1381 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 46</li> <li>● 802.3bt (60 W per port): 23</li> </ul>
600 W AC (220 V)	–	241 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 15</li> <li>● 802.3at (30 W per port): 8</li> <li>● 802.3bt (60 W per port): 4</li> </ul>
600 W AC (220 V)	600 W AC (220 V)	811 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 27</li> <li>● 802.3bt (60 W per port): 13</li> </ul>

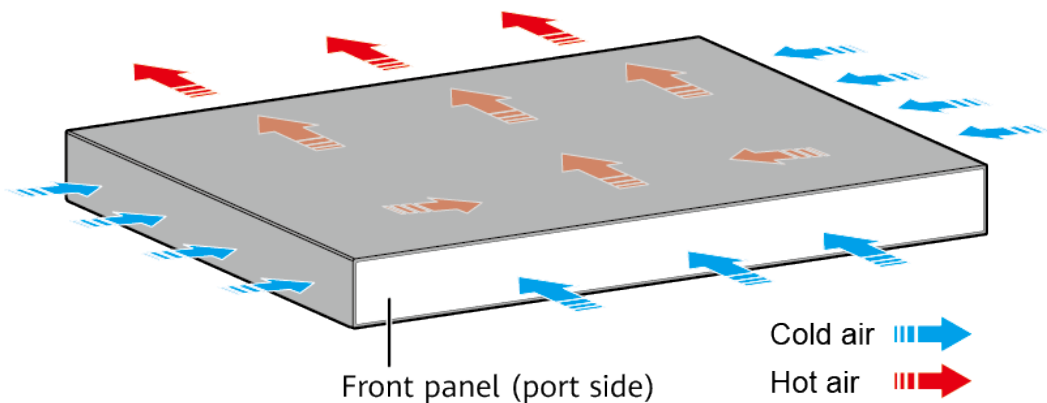
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1191 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 39</li> <li>802.3bt (60 W per port): 19</li> </ul>

**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

### Heat Dissipation

The S5732-H48UM2CC uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

### Technical Specifications

[Table 4-1550](#) lists technical specifications of the S5732-H48UM2CC.

**Table 4-1550** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	2 GB in total. To view the available flash memory size, run the <b>display version</b> command.



Item	Description
Mean time between failures (MTBF)	32.38 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 446.0 mm (1.72 in. x 17.4 in. x 17.6 in.)</li> </ul>
Weight (including package)	Without power modules: 8.4 kg (18.52 lb) Including one power module: 9.5 kg (20.94 lb)
Stack ports	Any Ethernet electrical ports (10GE), optical ports on the front panel (25GE/40GE/100GE), or optical ports on the card (10GE/25GE/40GE/100GE)
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"><li>• Not providing the PoE function: 347 W (without card)</li><li>• 100% PoE loads: 2043 W (PoE: 1571 W, without card)</li></ul>
Typical power consumption (30% of traffic load, tested according to ATIS standard)	215 W (without card)
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F). The operating temperature of the switch is -5°C to 40°C (23°F to 104°F) when it uses QSFP-100G-ER4 optical module.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 59.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>

Item	Description
Part number	02353HUB 02353HUB-002 02353SJT 02353SJT-001 02353SJT-003 02353SJT-004 02353SJT-010 02353SJT-011 02353SJT-013 02353SJT-014

## 4.29.6 S5732-H48UM2CC (02353SJT-020/02353SJT-021/02353SJT-023/02353SJT-024)

### Version Mapping

[Table 4-1551](#) lists the mapping between the S5732-H48UM2CC chassis and software versions.

**Table 4-1551** Version mapping

Series	Model	Software Version
S5732-H	S5732-H48UM2CC	02353SJT-020: Supported in V200R022C00 and later versions 02353SJT-021: Supported in V200R022C00 and later versions 02353SJT-023: Supported in V200R022C00 and later versions 02353SJT-024: Supported in V200R022C00 and later versions

There are several S5732-H48UM2CC bundles, which consists of different power supplies and ports, as listed in [Table 4-1552](#).

**Table 4-1552** S5732-H48UM2CC bundles

Part Number	Description	Remarks
02353SJT-020	S5732-H48UM2CC Base(48*100M/1G Ethernet ports, Optional RTU upgrade to 2.5/5/10G, 4*25GE SFP28, 2*100GE QSFP28 ports, 1*expansion slot, PoE++, without power module)	<p>By default, no power supply is configured.</p> <p>By default, multi-GE ports support 100 Mbit/s and 1000 Mbit/s. You can purchase an RTU license to increase the port rate to 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s.</p>
02353SJT-021	S5732-H48UM2CC 2.5&10G Bundle(36*100M/1G/2.5G, 12*100M/1G/2.5G/5G/10G Ethernet ports, Optional RTU upgrade to 5/10G, 4*25GE SFP28, 2*100GE QSFP28 ports, 1*expansion slot, PoE++, with AC power supply)	<p>By default, one 1000 W AC power module is configured.</p> <p>By default, the first 36 multi-GE ports support 100 Mbit/s, 1000 Mbit/s, and 2.5 Gbit/s. You can purchase an RTU license to increase the port rate to 5 Gbit/s or 10 Gbit/s.</p> <p>By default, the last 12 multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, 5 Gbit/s, and 10 Gbit/s.</p> <p>There is a label on the rear side of the device, which contains the default rate "36*2.5GE +12*10GE" supported by the multi-GE ports.</p>

Part Number	Description	Remarks
02353SJT-023	S5732-H48UM2CC 5G Bundle(48*100M/1G/2.5G/5G Ethernet ports, Optional RTU upgrade to 10G, 4*25GE SFP28, 2*100GE QSFP28 ports, 1*expansion slot, PoE++, with AC power supply)	<p>By default, one 1000 W AC power module is configured.</p> <p>By default, multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, and 5 Gbit/s. You can purchase an RTU license to increase the port rate to 10 Gbit/s.</p> <p>There is a label on the rear side of the device, which contains the default rate "48*5GE" supported by the multi-GE ports.</p>
02353SJT-024	S5732-H48UM2CC 10G Bundle(48*100M/1G/2.5G/5G/10G Ethernet ports, 4*25GE SFP28, 2*100GE QSFP28 ports, 1*expansion slot, PoE++, with AC power supply)	<p>By default, one 1000 W AC power module is configured.</p> <p>By default, multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, 5 Gbit/s, and 10 Gbit/s.</p> <p>There is a label on the rear side of the device, which contains the default rate "48*10GE" supported by the multi-GE ports.</p>

 NOTE

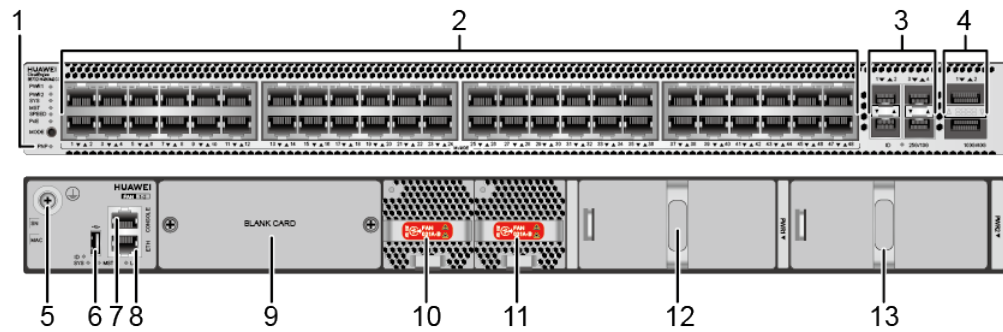
A pre-configured or loaded RTU (right to use) license of a device is bound to the device ESN and cannot be unbound or transferred to other devices.

For details about the RTU licenses supported by the device and how to load them, see the *License Usage Guide*.

The rate of MultiGE ports can be increased using the RTU license. After the license is activated, you can run the **assign group-speed** command and restart the device to make the configured maximum rate supported by the ports in the MultiGE port group take effect. To check the default rate of MultiGE ports, run the **display device group-speed configuration** command. The **BaseSpeed** field indicates the default rate.

## Appearance and Structure

Figure 4-587 S5732-H48UM2CC appearance



<p>1 One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	<p>2 Forty-eight 100M/1000M/2.5GE/5GE/10GE BASE-T PoE++ ports (multi-GE ports)</p>
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3	<p>Four 10GE/25GE SFP28 optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>25GE SFP28 Optical Module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>1 m and 3 m SFP28 high-speed copper cables</b></li> <li>• <b>3 m, 5 m, 7 m, and 10 m SFP28 AOC cables</b></li> </ul>	4	<p>Two 40GE/100GE QSFP28 optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>QSFP+ optical module</b></li> <li>• <b>QSFP28 optical module</b></li> <li>• <b>1 m, 3 m, and 5 m QSFP+ to QSFP+ high-speed copper cables</b></li> <li>• <b>10 m QSFP+ to QSFP+ AOC cable</b></li> <li>• <b>1 m and 3 m QSFP28 to QSFP28 high-speed copper cables</b></li> <li>• <b>10 m QSFP28 to QSFP28 AOC cable</b></li> <li>• <b>2 m QSFP28 dedicated stack cable</b></li> </ul> <p><b>NOTE</b></p> <p>A QSFP28 optical port cannot be split into four 10GE ports, regardless of whether the port uses a QSFP28 or QSFP+ optical module.</p> <p>The default rate of a QSFP28 optical port is 100 Gbit/s. When a QSFP+ optical module or QSFP+ cable is used, the rate can be auto-sensing to 40 Gbit/s.</p>
5	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	6	<p>One USB port</p>
7	<p>One console port</p>	8	<p>One ETH management port</p>
9	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Applicable card:</p> <ul style="list-style-type: none"> <li>• <b>S7X08000</b></li> <li>• <b>S7Y08000</b></li> <li>• <b>S7Q02001 (02313UBW)</b></li> <li>• <b>S7Q02001 (02313UBW-002)</b></li> <li>• <b>S7C02000</b></li> </ul>	10	<p>Fan module slot 1</p> <p><b>NOTE</b></p> <p>Applicable fan module: <b>7.5 FAN-031A-B (Fan box(B,FAN panel side exhaust))</b></p>

1 1	Fan module slot 2  <b>NOTE</b> Applicable fan module: <a href="#">7.5 FAN-031A-B (Fan box(B,FAN panel side exhaust))</a>	1 2	Power module slot 1  <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a></li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a></li> </ul>
1 3	Power module slot 2  <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a></li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a></li> </ul>	-	-

## Port Description

### 100M/1000M/2.5GE/5GE/10GE BASE-T port (multi-GE port)

A 100M/1000M/2.5GE/5GE/10GE BASE-T port (multi-GE port) sends and receives service data at 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s, and must use an **Ethernet cable**. If the 2.5 Gbit/s or 5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category. If the 10 Gbit/s speed is required, the port must use an Ethernet cable of Cat6A F/UTP or higher category. [Table 4-1553](#) describes the attributes of a 100M/1000M/2.5GE/5GE/10GE BASE-T port.



**Table 4-1553** Attributes of a 100M/1000M/2.5GE/5GE/10GE BASE-T port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3u, IEEE802.3ab, IEEE802.3bz, IEEE802.3an
Working Mode	100/1000/2500/5000/10000 Mbit/s auto-sensing

**Table 4-1554** lists the maximum transmission distances of different cables on multi-GE ports.

**Table 4-1554** Maximum transmission distances of different cables on multi-GE ports

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/1000M	2.5GE	5GE	10GE
Category 5e unshielded twisted pair (Cat5e UTP)	100 m	100 m	<ul style="list-style-type: none"> <li>• 55 m</li> <li>• 100 m (6-a-1 bundle only for the first 30 m)</li> </ul> Not recommended due to high risk	Not supported
Category 5e shielded twisted pair (Cat5e STP)	100 m	100 m	100 m	Not supported
Category 6 unshielded twisted pair (Cat6 UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported
Category 6 shielded twisted pair (Cat6 STP)	100 m	100 m	100 m	Not supported

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/1000M	2.5GE	5GE	10GE
Category 6A unshielded twisted pair (Cat6A U/UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported
Category 6A foiled/unshielded twisted pair (Cat6A F/UTP)	100 m	100 m	100 m	100 m
Category 6A shielded twisted pair (Cat6A STP)	100 m	100 m	100 m	100 m
Category 7 twisted pair (Cat7)	100 m	100 m	100 m	100 m

 **NOTE**

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

If a port works at a rate of 5 Gbit/s, you are advised not to use unshielded Ethernet cables due to the following causes:

- 802.3bz requires that the ALSNR value for alien crosstalk between Ethernet cables be greater than 0, but the standards for Cat5e and Cat6 unshielded twisted pairs do not specify the required ALSNR value. Therefore, such cables may not meet the crosstalk requirement in 802.3bz, causing severe problems such as continuous packet loss or port flapping may occur.
- According the cabling specification TIA TSB-5021, using Cat5e and Cat6 cables for 5G poses high risks.
- Currently, no clear onsite testing or evaluation method is available for checking whether ALSNR of cables conforms to 802.3bz.

If a port works at a rate of 5 Gbit/s and a Cat6 shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL Class E (+All) or TIA Cat 6 Channel (+All). If a Cat6A shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL2 Class Ea (+All) or TIA Cat6A Channel (+All). Otherwise, serious problems such as continuous packet loss or interface flapping may occur.

If a port works at a rate of 10 Gbit/s and a Cat6A shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL2 Class Ea (+All) or TIA Cat6A Channel (+All). Otherwise, serious problems such as continuous packet loss or interface flapping may occur.

If Cat5e and Cat6 unshielded twisted pairs do not meet the 5G requirement, you are advised to replace them with shielded twisted pairs or reduce the rate of ports to 2.5G.

If Cat5E, Cat6, or Cat6A unshielded twisted pairs are used on electrical ports working at 10 Gbit/s, severe problems such as continuous packet loss or port flapping may occur.

**10GE/25GE SFP28 optical port**

A 10GE/25GE SFP28 optical port sends and receives service data at 10 Gbit/s, or 25 Gbit/s. [Table 4-1533](#) describes the attributes of a 10GE/25GE SFP28 optical port.

**Table 4-1555** Attributes of a 10GE/25GE SFP28 optical port

Attribute	Description
Connector Type	LC/PC
Optical port attributes	Depending on the optical module or cable in use
Standards compliance	IEEE802.3z, IEEE802.3ae, and IEEE802.3by
Working mode	<ul style="list-style-type: none"><li>When a 25GE optical module or cable is connected to a port, the port can automatically adjust its rate to 25 Gbit/s.</li><li>When a 10GE optical module or cable is connected to a port, the port can automatically adjust its rate to 10 Gbit/s.</li></ul>

#### 40GE/100GE QSFP28 optical port

A 40GE/100GE QSFP28 optical port sends and receives service traffic at 40 Gbit/s or 100 Gbit/s. [Table 4-1556](#) describes the attributes of a QSFP28 optical port.

**Table 4-1556** Attributes of a QSFP28 optical port

Attribute	Description
Connector type	MPO/LC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ba

#### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1557](#).

**Table 4-1557** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1558](#) describes the attributes of an ETH management port.

**Table 4-1558** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5732-H48UM2CC has the same types of indicators as the S5732-H24UM2CC. For details, see [Indicator Description](#).

## Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1559** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	682 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 44</li> <li>● 802.3at (30 W per port): 22</li> <li>● 802.3bt (60 W per port): 11</li> <li>● 802.3bt (90 W per port): 7</li> </ul>
1000 W AC (110 V)	–	587 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 38</li> <li>● 802.3at (30 W per port): 19</li> <li>● 802.3bt (60 W per port): 9</li> <li>● 802.3bt (90 W per port): 6</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1632 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 48</li> <li>● 802.3bt (60 W per port): 27</li> <li>● 802.3bt (90 W per port): 18</li> </ul>

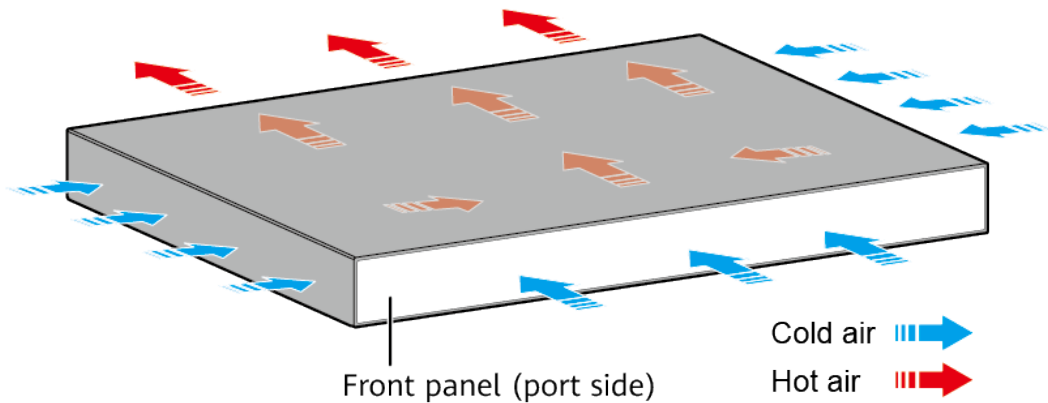
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1442 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 48</li> <li>● 802.3bt (60 W per port): 24</li> <li>● 802.3bt (90 W per port): 16</li> </ul>
600 W AC (220 V)	-	302 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 19</li> <li>● 802.3at (30 W per port): 10</li> <li>● 802.3bt (60 W per port): 5</li> <li>● 802.3bt (90 W per port): 3</li> </ul>
600 W AC (220 V)	600 W AC (220 V)	872 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 29</li> <li>● 802.3bt (60 W per port): 14</li> <li>● 802.3bt (90 W per port): 9</li> </ul>
600 W AC (110 V)	600 W AC (110 V)	302 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 19</li> <li>● 802.3at (30 W per port): 10</li> <li>● 802.3bt (60 W per port): 5</li> <li>● 802.3bt (90 W per port): 3</li> </ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1252 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 41</li> <li>● 802.3bt (60 W per port): 20</li> <li>● 802.3bt (90 W per port): 13</li> </ul>

**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

## Heat Dissipation

The S5732-H48UM2CC uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1560](#) lists technical specifications of the S5732-H48UM2CC.

**Table 4-1560** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	2 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	42.49 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV

Item	Description
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 446.0 mm (1.72 in. x 17.4 in. x 17.6 in.)</li> </ul>
Weight (including package)	Without power modules: 9.53 kg (21.01 lb) Including one power module: 10.57 kg (23.3 lb)
Stack ports	Any Ethernet electrical ports (10GE), optical ports on the front panel (25GE/40GE/100GE), or optical ports on the card (10GE/25GE/40GE/100GE)
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 297 W (without card)</li> <li>100% PoE loads: 2013 W (PoE: 1632 W, without card)</li> </ul>
Typical power consumption (30% of traffic load, tested according to ATIS standard)	210 W (without card)



Item	Description
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F). The operating temperature of the switch is -5°C to 40°C (23°F to 104°F) when it uses QSFP-100G-ER4 optical module.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	<ul style="list-style-type: none"> <li>• Dual AC 600 W, 30% load: 49.2 dBA</li> <li>• Dual AC 1000 W, 30% load: 51.2 dBA</li> <li>• Dual-DC 1000 W, 30% load: 51.2 dBA</li> </ul>
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	02353SJT-020 02353SJT-021 02353SJT-023 02353SJT-024

## 4.29.7 S5732-H48XUM2CC (02353MLH/02353MLH-001/02353MLH-002)

### Version Mapping

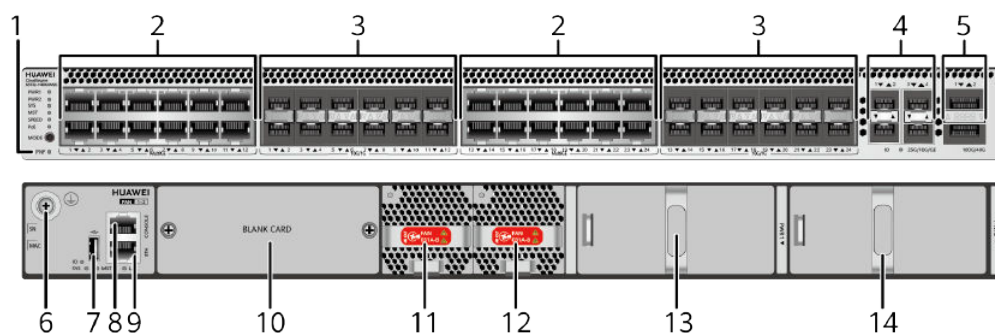
**Table 4-1561** lists the mapping between the S5732-H48XUM2CC chassis and software versions.

**Table 4-1561** Version mapping

Series	Model	Software Version
S5732-H	S5732-H48XUM2CC	02353MLH: V200R019C20 and later versions 02353MLH-001: V200R021C10 and later versions 02353MLH-002: V200R023C10 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-588** S5732-H48XUM2CC appearance



<p>1</p> <p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	<p>2</p> <p>Twenty-four PoE++ 100M/1000M/2.5GE/5GE/10GE BASE-T ports (multi-GE ports)</p> <p><b>NOTE</b></p> <p>The S5732-H48XUM2CC is a hybrid optical-electrical switch. You can use one multi-GE port and one 10GE SFP+ optical port together by connecting them through a hybrid cable. This cable is composed of copper cores terminated on RJ45 connectors and optical fibers terminated on LC connectors. The typical application scenario is as follows:</p> <ul style="list-style-type: none"> <li>• The copper cores connect a multi-GE port of a switch to a PoE_IN port of an AP to allow the switch to supply power to the AP while no data is transmitted over this cable.</li> <li>• The optical fibers connect a SFP+ optical port on the switch to a SFP+ optical port of the AP to transmit data.</li> </ul>
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3	<p>Twenty-four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (supported by the last 16 SFP+ ports and used only for zero-configuration stacking)</b></li> <li>• <b>First-generation Hybrid Cable</b></li> </ul> <p><b>NOTE</b></p> <p>It is recommended that optical fibers in the first-generation hybrid cables be fusion spliced onsite. If you assemble optical fibers in hybrid cables in mechanical splicing mode, only SFP-10G-iLR-S optical modules are supported.</p>	4	<p>Four 1GE/10GE/25GE SFP28 optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>25GE SFP28 Optical Module</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>1 m, 3 m, and 5 m SFP28 high-speed copper cables</b></li> <li>• <b>3 m, 5 m, 7 m, and 10 m SFP28 AOC cables</b></li> </ul>
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5	<p>Two 40GE/100GE QSFP28 optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>QSFP+ optical module</b></li> <li>• <b>QSFP28 optical module</b></li> <li>• <b>1 m, 3 m, and 5 m QSFP+ high-speed copper cables</b></li> <li>• <b>10 m QSFP+ AOC cable</b></li> <li>• <b>1 m, 3 m, and 5 m QSFP28 high-speed copper cables</b></li> <li>• <b>10 m QSFP28 AOC cable</b></li> <li>• <b>2 m QSFP28 dedicated stack cable (supported in V200R020C10 and later versions)</b></li> </ul> <p><b>NOTE</b></p> <p>You can run the <b>set device port-config-mode enable</b> command to change the working mode of SFP28 and QSFP28 optical ports. By default, the working mode of SFP28 and QSFP28 optical ports is "4 x 25GE + 2 x 40GE".</p> <p>If any QSFP28 optical port is configured to work at 100 Gbit/s or split into four 25GE ports, the four SFP28 optical ports become unavailable.</p>	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>
7	One USB port	8	One console port
9	One ETH management port	10	<p>Rear card slot</p> <p><b>NOTE</b></p> <p>Applicable card:</p> <ul style="list-style-type: none"> <li>• <b>S7X08000</b></li> <li>• <b>S7Y08000</b></li> <li>• <b>S7Q02001 (02313UBW)</b> (applicable in V200R022C00 and later versions)</li> <li>• <b>S7Q02001 (02313UBW-002)</b> (applicable in V200R022C00 and later versions)</li> <li>• <b>S7C02000</b> (applicable in V200R022C00 and later versions)</li> </ul>
11	<p>Fan module slot 1</p> <p><b>NOTE</b></p> <p>Applicable fan module: <b>7.5 FAN-031A-B (Fan box(B,FAN panel side exhaust))</b></p>	12	<p>Fan module slot 2</p> <p><b>NOTE</b></p> <p>Applicable fan module: <b>7.5 FAN-031A-B (Fan box(B,FAN panel side exhaust))</b></p>

1 3	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a> (applicable in V200R021C10 and later versions)</li> </ul>	1 4	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a> (applicable in V200R021C10 and later versions)</li> </ul>
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## Port Description

### 100M/1000M/2.5GE/5GE/10GE BASE-T port (multi-GE port)

A 100M/1000M/2.5GE/5GE/10GE BASE-T port (multi-GE port) sends and receives service data at 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s, and must use an [Ethernet cable](#). If the 2.5 Gbit/s or 5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category. If the 10 Gbit/s speed is required, the port must use an Ethernet cable of Cat6A F/UTP or higher category. [Table 4-1562](#) describes the attributes of a 100M/1000M/2.5GE/5GE/10GE BASE-T port.

**Table 4-1562** Attributes of a 100M/1000M/2.5GE/5GE/10GE BASE-T port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3u, IEEE802.3ab, IEEE802.3bz, IEEE802.3an
Working Mode	100/1000/2500/5000/10000 Mbit/s auto-sensing

[Table 4-1563](#) lists the maximum transmission distances of different cables on multi-GE ports.

**Table 4-1563** Maximum transmission distances of different cables on multi-GE ports

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/1000M	2.5GE	5GE	10GE
Category 5e unshielded twisted pair (Cat5e UTP)	100 m	100 m	<ul style="list-style-type: none"> <li>• 55 m</li> <li>• 100 m (6-a-1 bundle only for the first 30 m)</li> </ul> Not recommended due to high risk	Not supported
Category 5e shielded twisted pair (Cat5e STP)	100 m	100 m	100 m	Not supported
Category 6 unshielded twisted pair (Cat6 UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported
Category 6 shielded twisted pair (Cat6 STP)	100 m	100 m	100 m	Not supported
Category 6A unshielded twisted pair (Cat6A U/UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported
Category 6A foiled/unshielded twisted pair (Cat6A F/UTP)	100 m	100 m	100 m	100 m
Category 6A shielded twisted pair (Cat6A STP)	100 m	100 m	100 m	100 m
Category 7 twisted pair (Cat7)	100 m	100 m	100 m	100 m

 **NOTE**

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

If a port works at a rate of 5 Gbit/s, you are advised not to use unshielded Ethernet cables due to the following causes:

- 802.3bz requires that the ALSNR value for alien crosstalk between Ethernet cables be greater than 0, but the standards for Cat5e and Cat6 unshielded twisted pairs do not specify the required ALSNR value. Therefore, such cables may not meet the crosstalk requirement in 802.3bz, causing severe problems such as continuous packet loss or port flapping may occur.
- According the cabling specification TIA TSB-5021, using Cat5e and Cat6 cables for 5G poses high risks.
- Currently, no clear onsite testing or evaluation method is available for checking whether ALSNR of cables conforms to 802.3bz.

If a port works at a rate of 5 Gbit/s and a Cat6 shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL Class E (+All) or TIA Cat 6 Channel (+All). If a Cat6A shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL2 Class Ea (+All) or TIA Cat6A Channel (+All). Otherwise, serious problems such as continuous packet loss or interface flapping may occur.

If a port works at a rate of 10 Gbit/s and a Cat6A shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL2 Class Ea (+All) or TIA Cat6A Channel (+All). Otherwise, serious problems such as continuous packet loss or interface flapping may occur.

If Cat5e and Cat6 unshielded twisted pairs do not meet the 5G requirement, you are advised to replace them with shielded twisted pairs or reduce the rate of ports to 2.5G.

If Cat5E, Cat6, or Cat6A unshielded twisted pairs are used on electrical ports working at 10 Gbit/s, severe problems such as continuous packet loss or port flapping may occur.

The PoE power supply capability and distance of multi-GE ports on the S5732-H48XUM2CC vary depending on the power supply medium, as listed in [Table 4-1564](#).

**Table 4-1564** PoE power supply capabilities of multi-GE ports when different power supply media are used

Power Supply Medium (Cable Diameter)	Power Received by an AP	AP-Side Voltage	Maximum Power Supply Distance
Category 5e Ethernet cable (AWG23)	53 W (class 6)	47.2 V	100 m
	51 W (class 6)	45.0 V	150 m
Category 6 or 6A Ethernet cable (AWG24)	55 W (class 6)	47.2 V	100 m
	52 W (class 6)	45.0 V	150 m
Hybrid cable (1.5 mm <sup>2</sup> )	57 W (class 6)	52.2 V	100 m
	55 W (class 6)	50.8 V	150 m
	54 W (class 6)	50.0 V	180 m
	54 W (class 6)	49.4 V	200 m

Power Supply Medium (Cable Diameter)	Power Received by an AP	AP-Side Voltage	Maximum Power Supply Distance
	52 W (class 6)	48.0 V	250 m
	51 W (class 6)	46.5 V	300 m

 **NOTE**

An AP can receive a maximum of 57 W power from a multi-GE port within the power supply distance of 100 m.

When a common Cat6A shielded cable is used for both PoE power supply and data transmission (10 Gbit/s), the maximum power supply distance is 100 m in compliance with 802.3bt.

When a common Cat5E, Cat6, or Cat6A Ethernet cable is used only for PoE power supply and optical fibers are used for data transmission, the maximum power supply distance is 150 m in compliance with 802.3bt.

A hybrid cable supplies PoE power to specific AP models through its copper cores and transmits data through its optical fibers. For details about the AP models to which hybrid cables can supply power, see the WLAN AP product documentation.

A hybrid cable cannot be used to supply power to dual-signature APs.

A hybrid cable can offer the power supply capabilities listed in [Table 4-1564](#) only when the impedance of its copper cores is within 12.8 ohms/km. If the impedance exceeds this value, the power supply capabilities (power received by and voltage of the AP) will decrease.

**10GE SFP+ optical port**

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1565](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1565** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

**1GE/10GE/25GE SFP28 optical port**

A 1GE/10GE/25GE SFP28 optical port sends and receives service data at 1 Gbit/s, 10 Gbit/s, or 25 Gbit/s. [Table 4-1521](#) describes the attributes of a 1GE/10GE/25GE SFP28 optical port.



**Table 4-1566** Attributes of a 1GE/10GE/25GE SFP28 optical port

Attribute	Description
Connector Type	LC/PC
Optical port attributes	Depending on the optical module or cable in use
Standards compliance	IEEE802.3z, IEEE802.3ae, and IEEE802.3by
Working mode	<ul style="list-style-type: none"><li>• When a 25GE optical module or cable is connected to a port, the port can automatically adjust its rate to 25 Gbit/s.</li><li>• When a 10GE optical module or cable is connected to a port, the port can automatically adjust its rate to 10 Gbit/s.</li><li>• Before installing a GE optical module or copper module on a port, run the <b>port mode ge</b> command to configure the port to work at 1 Gbit/s.</li></ul>

#### 40GE/100GE QSFP28 optical port

A 40GE/100GE QSFP28 optical port sends and receives service traffic at 40 Gbit/s or 100 Gbit/s. [Table 4-1567](#) describes the attributes of a QSFP28 optical port.

**Table 4-1567** Attributes of a QSFP28 optical port

Attribute	Description
Connector type	MPO/LC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ba

#### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1568](#).

**Table 4-1568** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1569](#) describes the attributes of an ETH management port.

**Table 4-1569** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5732-H48XUM2CC has the same types of indicators as the S5732-H24UM2CC. For details, see [Indicator Description](#).

## Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1570** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	598 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 19</li> <li>802.3bt (60 W per port): 9</li> </ul>
1000 W AC (110 V)	–	503 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 16</li> <li>802.3bt (60 W per port): 8</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1440 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 24</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1358 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 22</li> </ul>

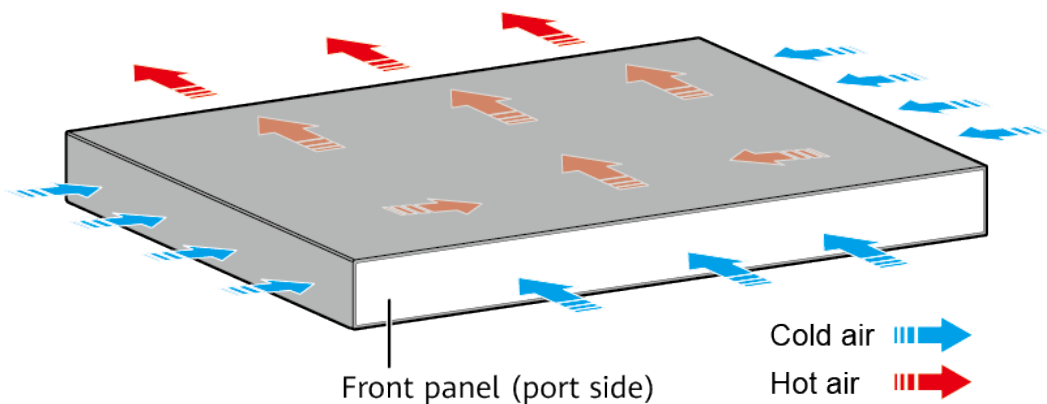
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
600 W AC (220 V)	–	218 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 14</li> <li>802.3at (30 W per port): 7</li> <li>802.3bt (60 W per port): 3</li> </ul>
600 W AC (220 V)	600 W AC (220 V)	788 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 13</li> </ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1168 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> <li>802.3bt (60 W per port): 19</li> </ul>

**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

## Heat Dissipation

The S5732-H48XUM2CC uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1571** lists technical specifications of the S5732-H48XUM2CC.

**Table 4-1571** Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	2 GB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	32.38 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 6$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 446.0 mm (1.72 in. x 17.4 in. x 17.6 in.)</li> </ul>
Weight (including package)	8.2 kg (18.08 lb)
Stack ports	Any Ethernet electrical ports (10GE), optical ports on the front panel (10GE/25GE/40GE/100GE), or optical ports on the card (10GE/25GE/40GE/100GE)
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>

Item	Description
Maximum voltage range	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>● High-Voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>● Not providing the PoE function: 338 W (without card)</li> <li>● 100% PoE loads: 1980 W (PoE: 1440 W, without card)</li> </ul>
Typical power consumption (30% of traffic load, tested according to ATIS standard)	231 W (without card)
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p> <p>The operating temperature of the switch is -5°C to 40°C (23°F to 104°F) when it uses QSFP-100G-ER4 optical module.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 63.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>● EMC certification</li> <li>● Safety certification</li> <li>● Manufacturing certification</li> </ul>
Part number	<p>02353MLH</p> <p>02353MLH-001</p> <p>02353MLH-002</p>

## 4.30 S5735-L

### 4.30.1 S5735-L12T4S-A

#### Version Mapping

**Table 4-1572** lists the mapping between the S5735-L12T4S-A chassis and software versions.

**Table 4-1572** Version mapping

Series	Model	Software Version
S5735-L	S5735-L12T4S-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

#### Appearance and Structure

**Figure 4-589** S5735-L12T4S-A appearance



1	Twelve 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module (applicable in V200R021C00 and later versions)</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (only used for stack connection, a maximum transmission distance of 0.4 km, OSXD22N00 not supported, applicable in V200R019C10 and later versions)</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>



7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1573](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1573** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1574](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1574** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used

Attribute	Description
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1575](#).

**Table 4-1575** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1576](#) describes the attributes of an ETH management port.

**Table 4-1576** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5735-L12T4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735-L12T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735-L12T4S-A has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation

The S5735-L12T4S-A has no fans and uses natural heat dissipation.

## Technical Specifications

[Table 4-1577](#) lists technical specifications of the S5735-L12T4S-A.

**Table 4-1577** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	98.6 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	3.83 kg (8.44 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum power consumption (100% throughput)	29 W
Typical power consumption (30% of traffic load)	23 W <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>

Item	Description
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p> <p>The operating temperature of the switch is -5°C to +40°C (23°F to 104°F) when it uses GE SFP optical modules with 40 km or longer transmission distance.</p> <p>When SFP+ copper cables or dedicated stack cables are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> <li>-5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM)</li> </ul> <p>When SFP+ AOC cables or 10GE SFP+ optical modules are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> <li>-5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM)</li> </ul>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	98010918

## 4.30.2 S5735-L12P4S-A

### Version Mapping

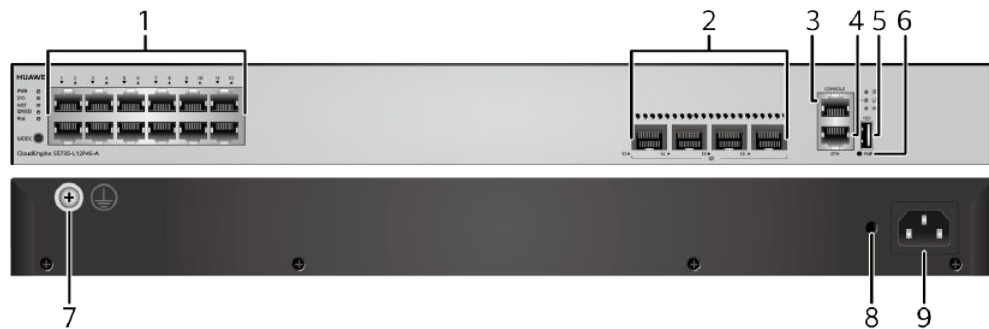
[Table 4-1578](#) lists the mapping between the S5735-L12P4S-A chassis and software versions.

**Table 4-1578** Version mapping

Series	Model	Software Version
S5735-L	S5735-L12P4S-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-590** S5735-L12P4S-A appearance



1	Twelve PoE+ 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"><li>• <b>FE optical module (applicable in V200R021C00 and later versions)</b></li><li>• <b>GE optical module</b></li><li>• <b>GE-CWDM optical module</b></li><li>• <b>GE-DWDM optical module</b></li><li>• <b>GE copper module</b></li><li>• <b>10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions)</b></li><li>• <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li><li>• <b>3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li><li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li></ul>
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1579](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1579** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1580](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1580** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used



Attribute	Description
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1581](#).

**Table 4-1581** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1582](#) describes the attributes of an ETH management port.

**Table 4-1582** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

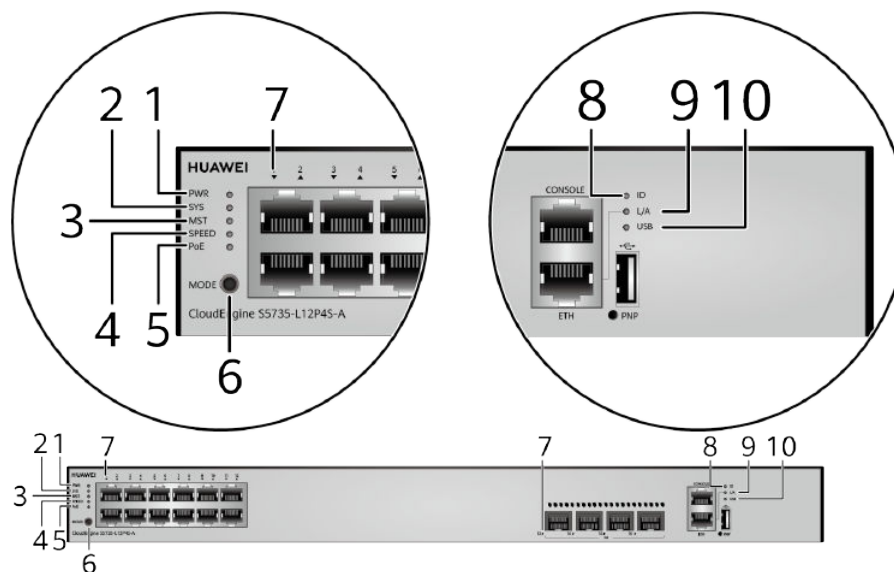
## Indicator Description

#### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-591 Indicators on the S5735-L12P4S-A



**Table 4-1583** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.

No.	Indicator	Name	Color	Status	Description
			Green	Blinking	<ul style="list-style-type: none"><li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li><li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li></ul>
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
5	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.

No.	Indicator	Name	Color	Status	Description
6	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p>
7	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1584</a> and <a href="#">Table 4-1585</a> .		
8	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
9	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.

No.	Indicator	Name	Color	Status	Description
10	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1584** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).

Display Mode	Color	Status	Description
	Green and yellow	Blinking green and yellow alternately	<p>The port fails to supply power to a PD due to one of the following reasons:</p> <ul style="list-style-type: none"> <li>• The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.</li> <li>• The total power consumption of PDs has reached the maximum power of the switch.</li> <li>• The manual power management mode is used and the port is not enabled to provide power to the PD.</li> </ul>

**Table 4-1585** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.

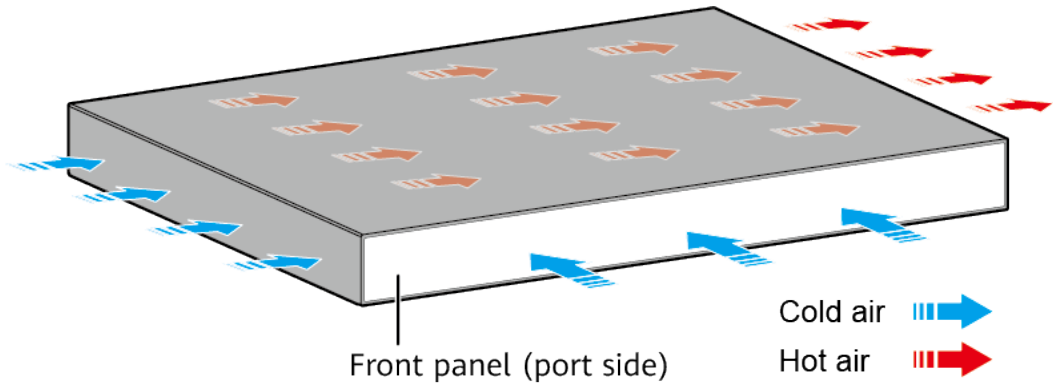
## Power Supply Configuration

The S5735-L12P4S-A has a built-in power module and does not support pluggable power modules. The built-in power module can provide 360 W PoE power, which ensures full PoE power on 12 ports in compliance with 802.3af or 802.3at.



## Heat Dissipation

The S5735-L12P4S-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1586](#) lists technical specifications of the S5735-L12P4S-A.

**Table 4-1586** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	85.52 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4.24 kg (9.35 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 49 W</li> <li>100% PoE loads: 441 W (PoE: 360 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	38 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The switch cannot be started when the ambient temperature is lower than 0°C (32°F).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"><li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li><li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li><li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li></ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	98010922

### 4.30.3 S5735-L24T4S-A

#### Version Mapping

[Table 4-1587](#) lists the mapping between the S5735-L24T4S-A chassis and software versions.

**Table 4-1587** Version mapping

Series	Model	Software Version
S5735-L	S5735-L24T4S-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-592** S5735-L24T4S-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module (applicable in V200R021C00 and later versions)</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (only used for stack connection, a maximum transmission distance of 0.4 km, OSXD22N00 not supported, applicable in V200R019C10 and later versions)</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1588](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1588** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1589](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1589** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used

Attribute	Description
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1590](#).

**Table 4-1590** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1591](#) describes the attributes of an ETH management port.

**Table 4-1591** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5735-L24T4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735-L24T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735-L24T4S-A has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation

The S5735-L24T4S-A has no fans and uses natural heat dissipation.

## Technical Specifications

[Table 4-1592](#) lists technical specifications of the S5735-L24T4S-A.

**Table 4-1592** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	111.94 years
Mean time to repair (MTTR)	2 hours



Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4.08 kg (9 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum power consumption (100% throughput)	34 W
Typical power consumption (30% of traffic load)	28 W <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>

Item	Description
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p> <p>The operating temperature of the switch is -5°C to +40°C (23°F to 104°F) when it uses GE SFP optical modules with 40 km or longer transmission distance.</p> <p>When SFP+ copper cables or dedicated stack cables are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> <li>-5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM)</li> </ul> <p>When SFP+ AOC cables or 10GE SFP+ optical modules are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> <li>-5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM)</li> </ul>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	98010914

## 4.30.4 S5735-L24P4S-A

### Version Mapping

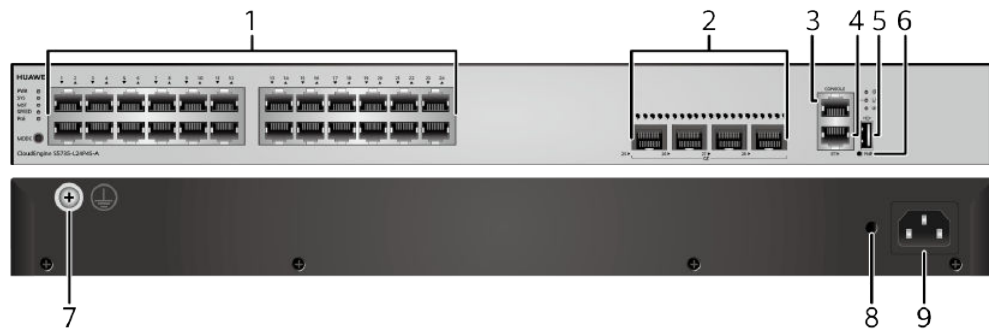
[Table 4-1593](#) lists the mapping between the S5735-L24P4S-A chassis and software versions.

**Table 4-1593** Version mapping

Series	Model	Software Version
S5735-L	S5735-L24P4S-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-593** S5735-L24P4S-A appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module (applicable in V200R021C00 and later versions)</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions)</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1594](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1594** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1595](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1595** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used

Attribute	Description
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1596](#).

**Table 4-1596** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1597](#) describes the attributes of an ETH management port.

**Table 4-1597** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

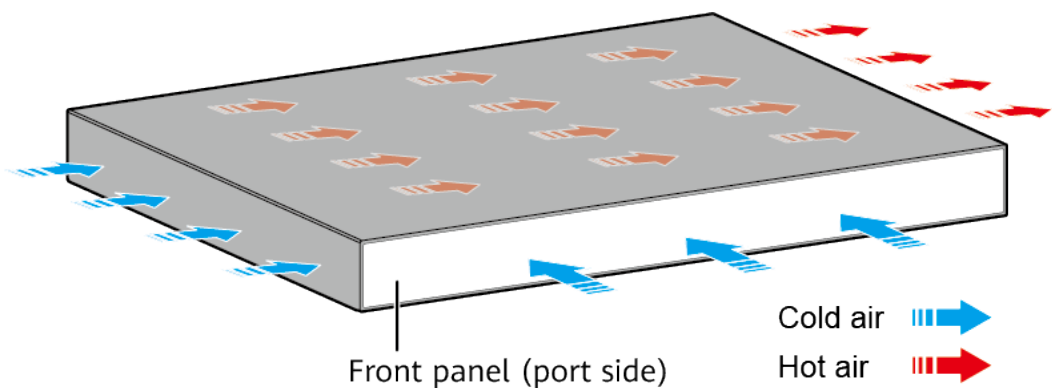
The S5735-L24P4S-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735-L24P4S-A has a built-in power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

## Heat Dissipation

The S5735-L24P4S-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



#### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1598** lists technical specifications of the S5735-L24P4S-A.

**Table 4-1598** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	92.2 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4.31 kg (9. lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>



Item	Description
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>• Not providing the PoE function: 53 W</li> <li>• 100% PoE loads: 451 W (PoE: 380 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	39 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.                     The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 57.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010924

### 4.30.5 S5735-L24T4X-A

#### Version Mapping

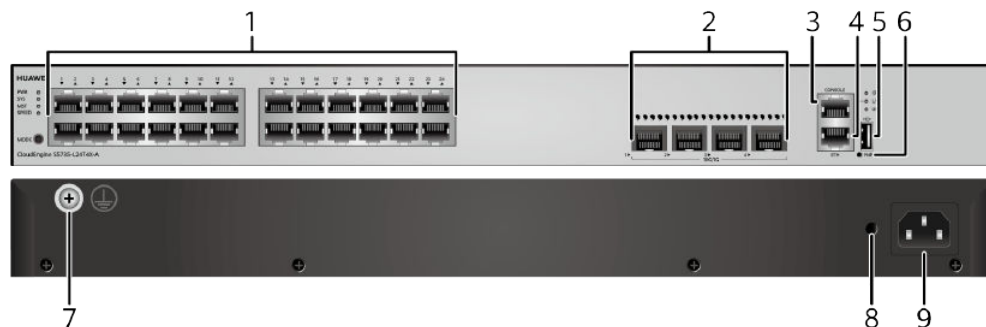
**Table 4-1599** lists the mapping between the S5735-L24T4X-A chassis and software versions.

**Table 4-1599** Version mapping

Series	Model	Software Version
S5735-L	S5735-L24T4X-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

#### Appearance and Structure

**Figure 4-594** S5735-L24T4X-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"><li>• <b>GE optical module</b></li><li>• <b>GE-CWDM optical module</b></li><li>• <b>GE-DWDM optical module</b></li><li>• <b>GE copper module (100M/1000M auto-sensing)</b></li><li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li><li>• <b>10GE-CWDM optical module</b></li><li>• <b>10GE-DWDM optical module</b></li><li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li><li>• <b>3 m and 10 m SFP+ AOC cables</b></li><li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li></ul>
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1600](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1600** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1601](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1601** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1602](#).

**Table 4-1602** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 4-1603** describes the attributes of an ETH management port.

**Table 4-1603** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

**NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

### Indicator Description

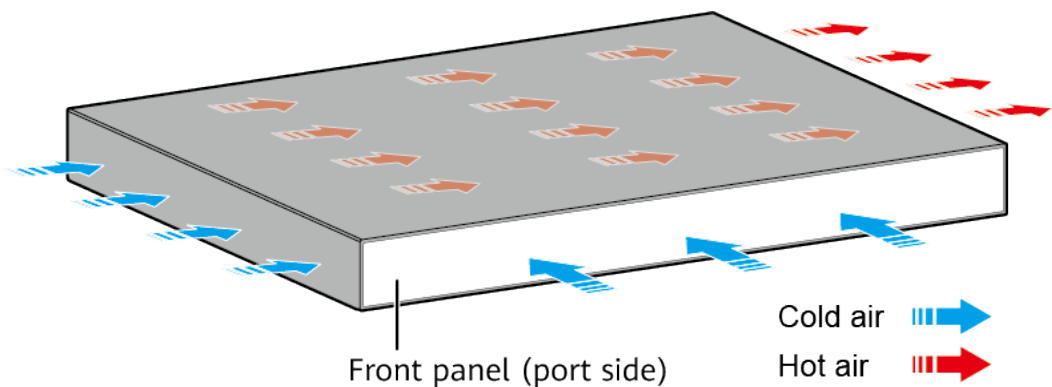
The S5735-L24T4X-A has similar indicators to those on the S5735-L12P4S-A except that the S5735-L24T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

### Power Supply Configuration

The S5735-L24T4X-A has a built-in AC power module and does not support pluggable power modules.

### Heat Dissipation

The S5735-L24T4X-A has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

### Technical Specifications

[Table 4-1604](#) lists technical specifications of the S5735-L24T4X-A.

**Table 4-1604** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	50.68 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4 kg (8.82 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	43 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	27 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.                     The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 47.3 dB(A)
Relative humidity	5% to 95%, noncondensing



Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010920

## 4.30.6 S5735-L24T4X-D

### Version Mapping

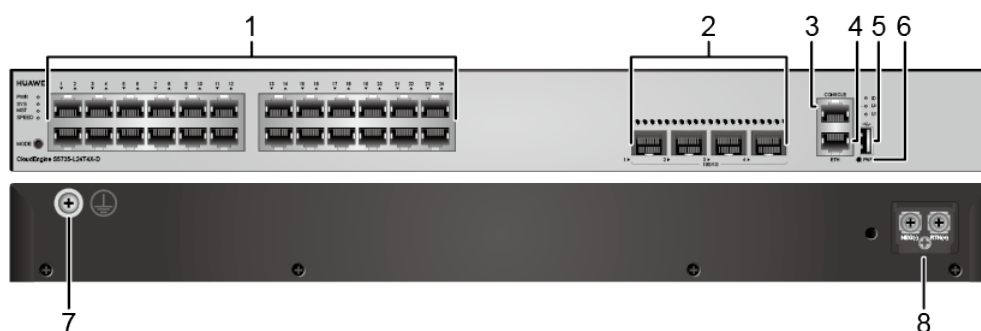
**Table 4-1605** lists the mapping between the S5735-L24T4X-D chassis and software versions.

**Table 4-1605** Version mapping

Series	Model	Software Version
S5735-L	S5735-L24T4X-D	V200R020C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-595** S5735-L24T4X-D appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"><li>• <b>GE optical module</b></li><li>• <b>GE-CWDM optical module</b></li><li>• <b>GE-DWDM optical module</b></li><li>• <b>GE copper module (100M/1000M auto-sensing)</b></li><li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li><li>• <b>10GE-CWDM optical module</b></li><li>• <b>10GE-DWDM optical module</b></li><li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li><li>• <b>3 m and 10 m SFP+ AOC cables</b></li><li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li></ul>
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	8	DC power terminal <b>NOTE</b> It is used with <b>DC Power Cable</b> .

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 4-1606** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1606** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1607](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1607** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1608](#).

**Table 4-1608** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1609](#) describes the attributes of an ETH management port.

**Table 4-1609** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

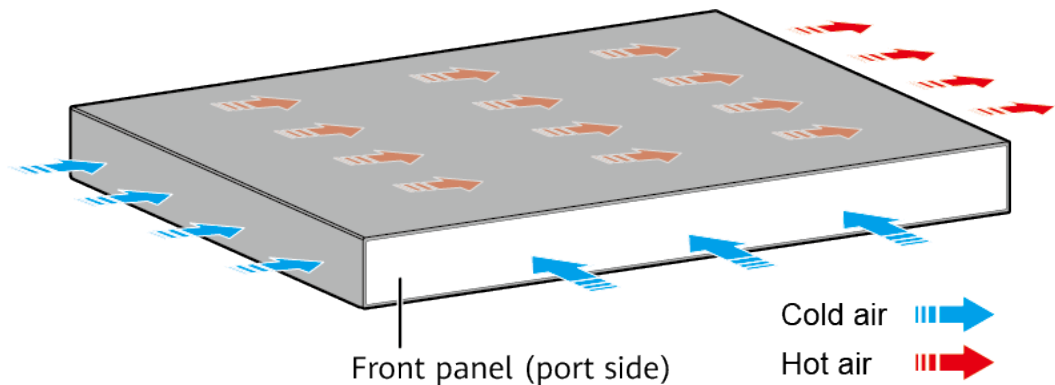
The S5735-L24T4X-D has similar indicators to those on the S5735-L12P4S-A except that the S5735-L24T4X-D does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735-L24T4X-D has a built-in DC power module and does not support pluggable power modules.

## Heat Dissipation

The S5735-L24T4X-D has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1610](#) lists technical specifications of the S5735-L24T4X-D.

**Table 4-1610** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	50.68 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 2$ kV in differential mode, $\pm 4$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4 kg (8.82 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	43 W
Typical power consumption (30% of traffic load)	27 W <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>

Item	Description
Operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 47.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010961

## 4.30.7 S5735-L24P4X-A

### Version Mapping

**Table 4-1611** lists the mapping between the S5735-L24P4X-A chassis and software versions.

**Table 4-1611** Version mapping

Series	Model	Software Version
S5735-L	S5735-L24P4X-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-596** S5735-L24P4X-A appearance





1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1612](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1612** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1613](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1613** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1614](#).

**Table 4-1614** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1615](#) describes the attributes of an ETH management port.

**Table 4-1615** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

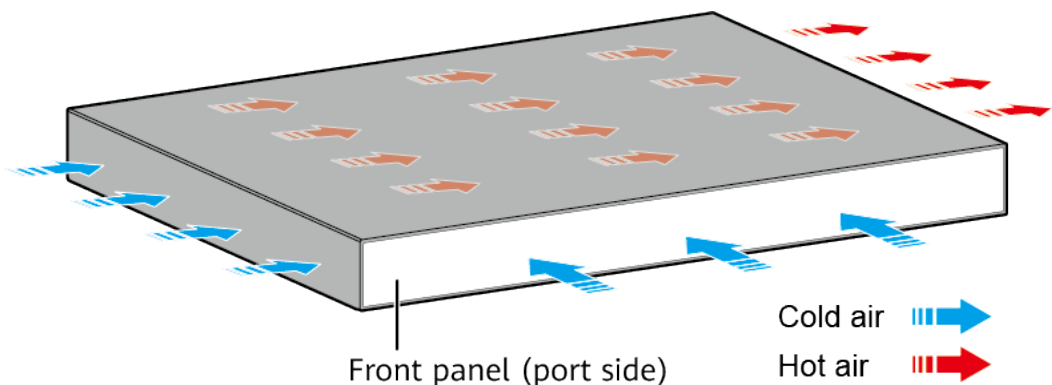
The S5735-L24P4X-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735-L24P4X-A has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

## Heat Dissipation

The S5735-L24P4X-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1616](#) lists technical specifications of the S5735-L24P4X-A.

**Table 4-1616** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.

Item	Description
Mean time between failures (MTBF)	57.07 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4.31 kg (9.5 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 56 W</li> <li>100% PoE loads: 458 W (PoE: 380 W)</li> </ul>

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	43 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.                     The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.7 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010927

## 4.30.8 S5735-L32ST4X-A

### Version Mapping

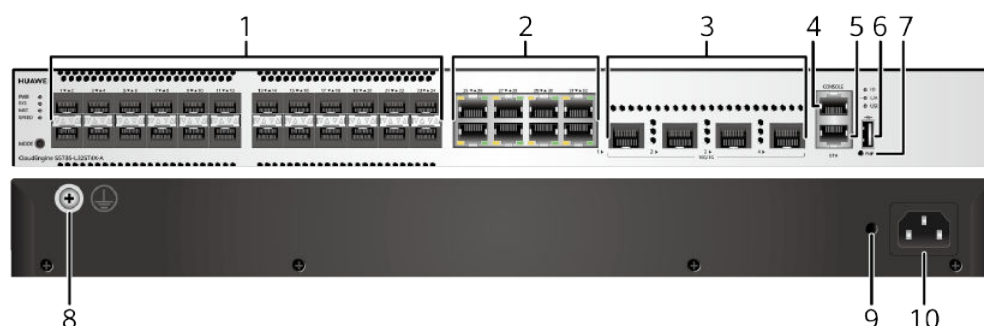
**Table 4-1617** lists the mapping between the S5735-L32ST4X-A chassis and software versions.

**Table 4-1617** Version mapping

Series	Model	Software Version
S5735-L	S5735-L32ST4X-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-597** S5735-L32ST4X-A appearance



1	Twenty-four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b> (maximum transmission distance ≤ 40 km)</li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>	2	Eight 10/100/1000BASE-T ports
3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>	4	One console port
5	One ETH management port	6	One USB port
7	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	8	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .



9	Jack for AC power cable locking strap  <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	1 0	AC socket  <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .
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## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-1618](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-1618** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1619](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1619** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1620](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1620** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1621](#).

**Table 4-1621** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1622](#) describes the attributes of an ETH management port.

**Table 4-1622** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

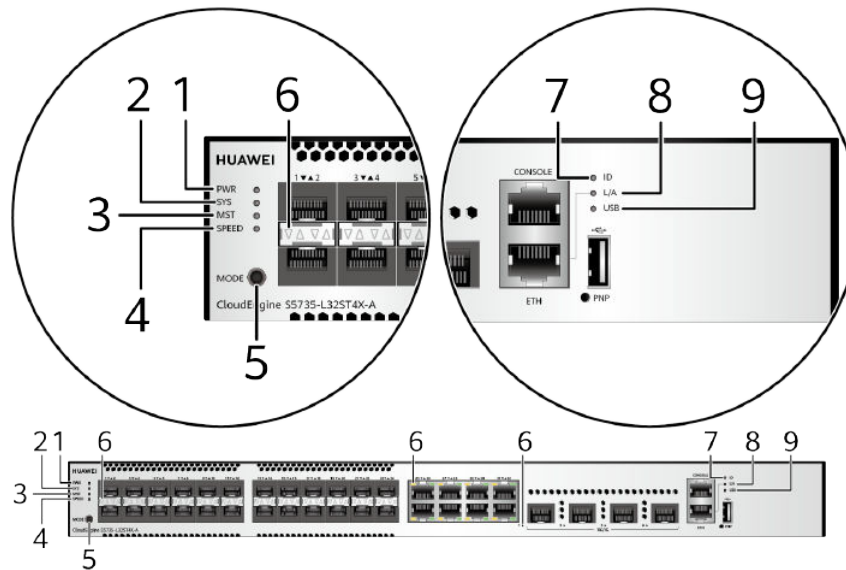
## Indicator Description

#### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

**Figure 4-598** Indicators on the S5735-L32ST4X-A



**Table 4-1623** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.

No.	Indicator	Name	Color	Status	Description
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.

No.	Indicator	Name	Color	Status	Description
5	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press the button a third time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED indicators are off.</p>
6	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1624</a> and <a href="#">Table 4-1625</a> .		
7	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
8	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.

No.	Indicator	Name	Color	Status	Description
9	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1624** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s.

**Table 4-1625** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.

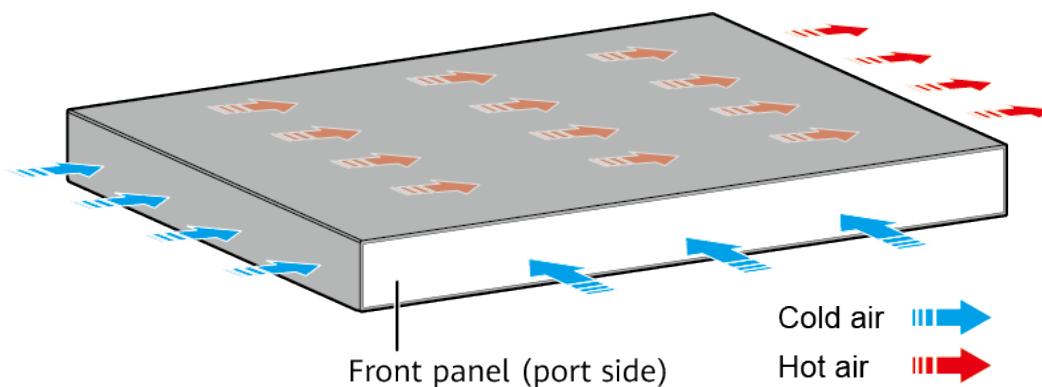


## Power Supply Configuration

The S5735-L32ST4X-A has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation

The S5735-L32ST4X-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1626](#) lists technical specifications of the S5735-L32ST4X-A.

**Table 4-1626** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	85.87 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4.31 kg (9.5 lb)
Stack ports	Any 10/100/1000BASE-T ports, 100/1000BASE-X ports, or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	65 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	46 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The switch cannot be started when the ambient temperature is lower than 0°C (32°F).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010929

## 4.30.9 S5735-L32ST4X-D

### Version Mapping

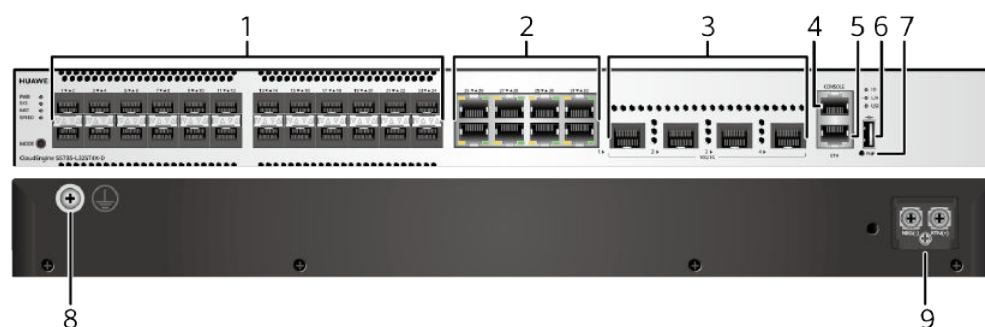
[Table 4-1627](#) lists the mapping between the S5735-L32ST4X-D chassis and software versions.

**Table 4-1627** Version mapping

Series	Model	Software Version
S5735-L	S5735-L32ST4X-D	V200R020C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-599** S5735-L32ST4X-D appearance



1	<p>Twenty-four 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b> (maximum transmission distance ≤ 40 km)</li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>	2	<p>Eight 10/100/1000BASE-T ports</p>
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3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"><li>• <b>GE optical module</b></li><li>• <b>GE-CWDM optical module</b></li><li>• <b>GE-DWDM optical module</b></li><li>• <b>GE copper module (100M/1000M auto-sensing)</b></li><li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li><li>• <b>10GE-CWDM optical module</b></li><li>• <b>10GE-DWDM optical module</b></li><li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li><li>• <b>3 m and 10 m SFP+ AOC cables</b></li><li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)</b></li></ul>	4	One console port
5	One ETH management port	6	One USB port
7	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	8	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .
9	DC power terminal <b>NOTE</b> It is used with <b>DC Power Cable</b> .	-	-

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-1628](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-1628** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1629](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1629** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1630](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1630** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1631](#).

**Table 4-1631** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1632](#) describes the attributes of an ETH management port.

**Table 4-1632** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

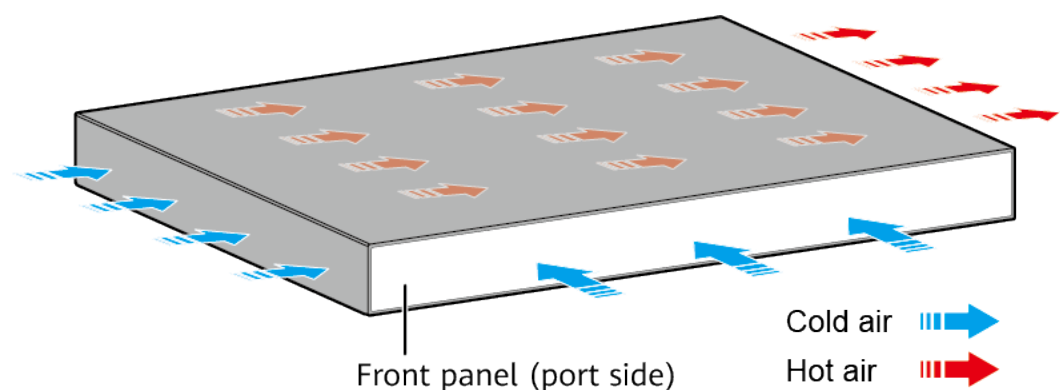
The S5735-L32ST4X-D has similar indicators to those on the S5735-L32ST4X-A. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735-L32ST4X-D has a built-in DC power module and does not support pluggable power modules.

## Heat Dissipation

The S5735-L32ST4X-D has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



#### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1633](#) lists technical specifications of the S5735-L32ST4X-D.



**Table 4-1633** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	85.87 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 2$ kV in differential mode, $\pm 4$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"><li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li><li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li></ul>
Weight (with packaging)	4.31 kg (9.5 lb)
Stack ports	Any 10/100/1000BASE-T ports, 100/1000BASE-X ports, or 10GE SFP+ ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	65 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	46 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.                     The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010965

## 4.30.10 S5735-L48T4S-A

### Version Mapping

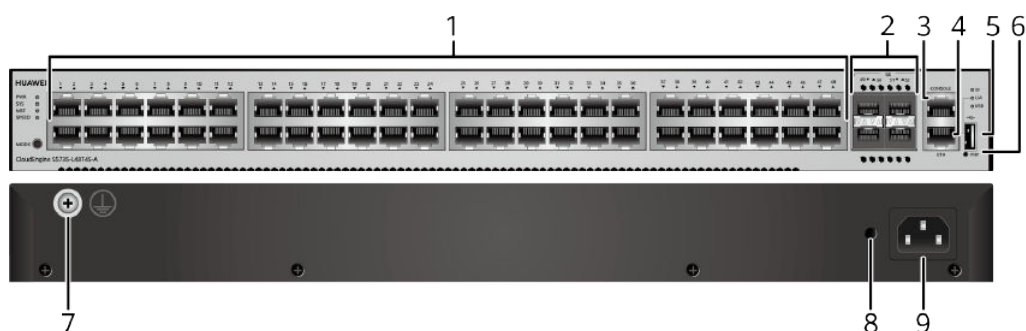
**Table 4-1634** lists the mapping between the S5735-L48T4S-A chassis and software versions.

**Table 4-1634** Version mapping

Series	Model	Software Version
S5735-L	S5735-L48T4S-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-600** S5735-L48T4S-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module (applicable in V200R021C00 and later versions)</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions)</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1635](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1635** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1636](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1636** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used

Attribute	Description
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1637](#).

**Table 4-1637** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1638](#) describes the attributes of an ETH management port.

**Table 4-1638** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

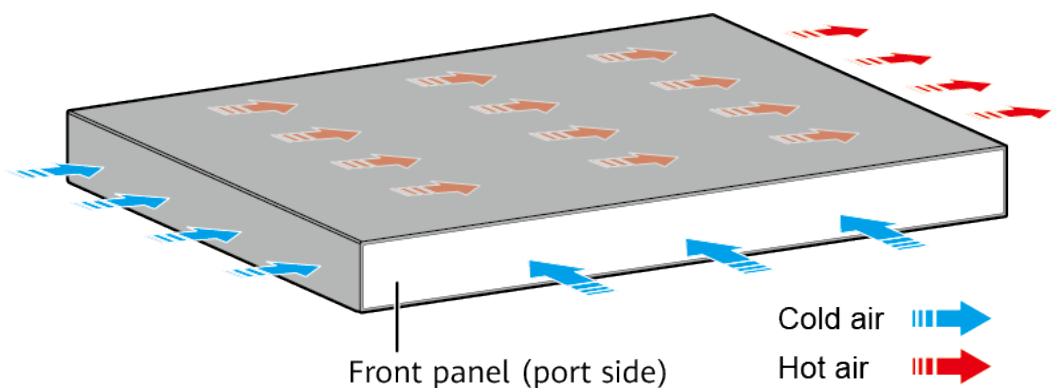
The S5735-L48T4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735-L48T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735-L48T4S-A has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation

The S5735-L48T4S-A has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



#### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1639](#) lists technical specifications of the S5735-L48T4S-A.

**Table 4-1639** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	46.36 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4.42 kg (9.75 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	53 W



Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	37 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.                     The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010933

### 4.30.11 S5735-L48T4X-A

#### Version Mapping

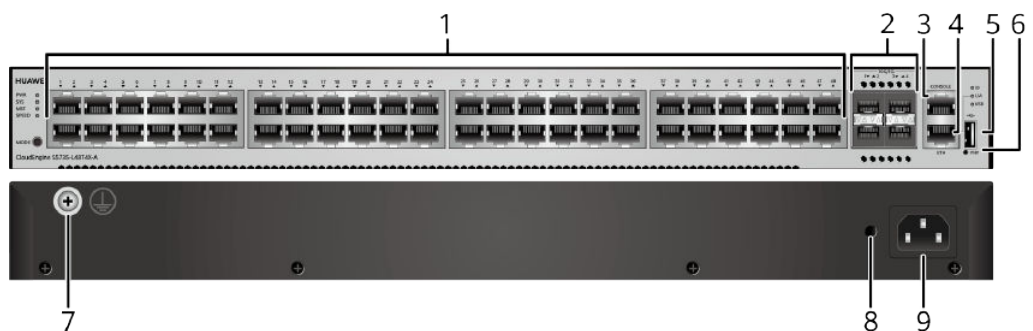
**Table 4-1640** lists the mapping between the S5735-L48T4X-A chassis and software versions.

**Table 4-1640** Version mapping

Series	Model	Software Version
S5735-L	S5735-L48T4X-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

#### Appearance and Structure

**Figure 4-601** S5735-L48T4X-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1641](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1641** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1642](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1642** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1643](#).

**Table 4-1643** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1644](#) describes the attributes of an ETH management port.

**Table 4-1644** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

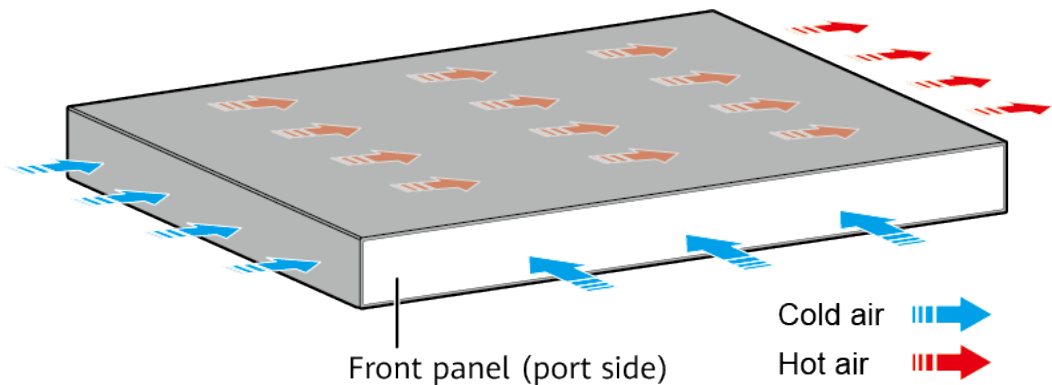
The S5735-L48T4X-A has similar indicators to those on the S5735-L12P4S-A except that the S5735-L48T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735-L48T4X-A has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation

The S5735-L48T4X-A has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1645](#) lists technical specifications of the S5735-L48T4X-A.

**Table 4-1645** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	41.48 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4.42 kg (9.75 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	54 W

Item	Description
<p>Typical power consumption (30% of traffic load)</p> <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	<p>39 W</p>
<p>Operating temperature</p>	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p> <p>The operating temperature of the switch is -5°C to +45°C (23°F to 113°F) when it uses 10GE SFP+ optical modules with 40 km or longer transmission distances.</p>
<p>Short-term operating temperature</p>	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
<p>Storage temperature</p>	<p>-40°C to +70°C (-40°F to +158°F)</p>



Item	Description
Noise under normal temperature (27°C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010936

## 4.30.12 S5735-L48P4X-A

### Version Mapping

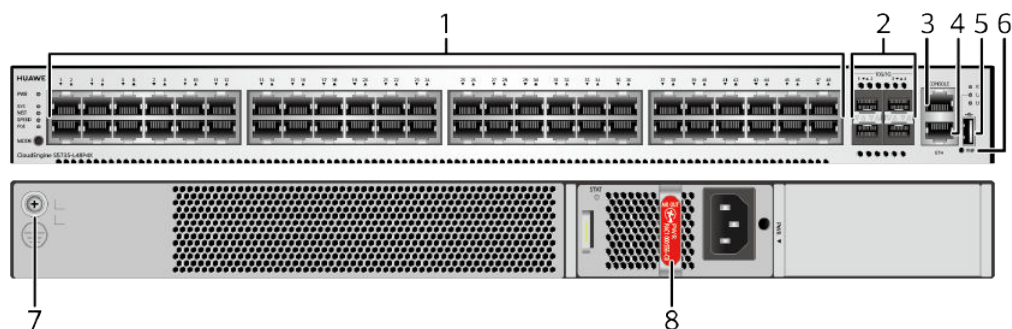
**Table 4-1646** lists the mapping between the S5735-L48P4X-A chassis and software versions.

**Table 4-1646** Version mapping

Series	Model	Software Version
S5735-L	S5735-L48P4X-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-602** S5735-L48P4X-A appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Power module slot</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> </ul>
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1647](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1647** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1648](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1648** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1649](#).

**Table 4-1649** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1650](#) describes the attributes of an ETH management port.

**Table 4-1650** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5735-L48P4X-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735-L48P4X-A is a PoE switch. It has one power module slot, which can have a 1000 W PoE power module installed. [Table 4-1651](#) lists its power supply configurations.

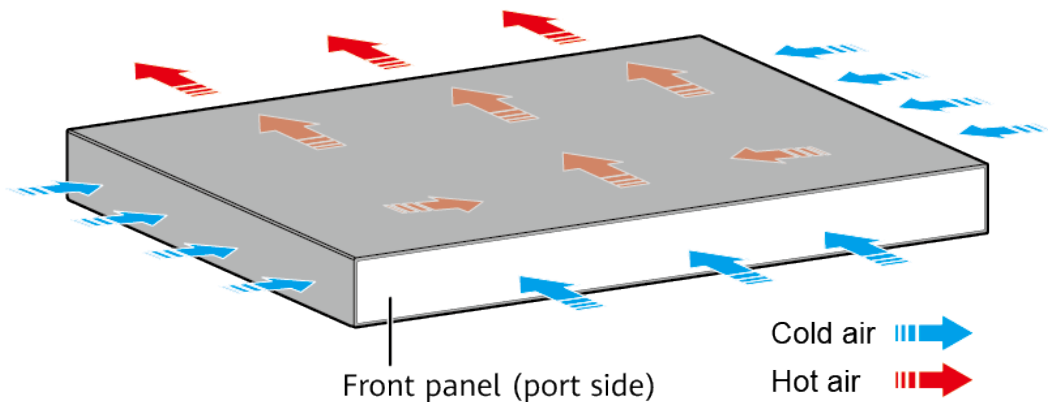
**Table 4-1651** Power supply configurations

Power Module	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	874 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 29</li> </ul>

Power Module	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (110 V)	779 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 25</li> </ul>

## Heat Dissipation

The S5735-L48P4X-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1652](#) lists technical specifications of the S5735-L48P4X-A.

**Table 4-1652** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	61.7 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV

Item	Description
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)</li> </ul>
Weight (with packaging)	8.7 kg (19.18 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 80 W</li> <li>100% PoE loads: 914 W (PoE: 874 W)</li> </ul>
Typical power consumption (30% of traffic load)	59 W
<ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	

Item	Description
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010944



## 4.31 S5735S-L

### 4.31.1 S5735S-L12T4S-A

#### Version Mapping

**Table 4-1653** lists the mapping between the S5735S-L12T4S-A chassis and software versions.

**Table 4-1653** Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L12T4S-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

#### Appearance and Structure

**Figure 4-603** S5735S-L12T4S-A appearance



1	Twelve 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module (applicable in V200R021C00 and later versions)</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (only used for stack connection, a maximum transmission distance of 0.4 km, OSXD22N00 not supported, applicable in V200R019C10 and later versions)</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1654](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1654** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1655](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1655** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used

Attribute	Description
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1656](#).

**Table 4-1656** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1657](#) describes the attributes of an ETH management port.

**Table 4-1657** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5735S-L12T4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L12T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735S-L12T4S-A has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation

The S5735S-L12T4S-A has no fans and uses natural heat dissipation.

## Technical Specifications

[Table 4-1658](#) lists technical specifications of the S5735S-L12T4S-A.

**Table 4-1658** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	98.6 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	3.83 kg (8.44 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum power consumption (100% throughput)	29 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	23 W

Item	Description
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p> <p>The operating temperature of the switch is -5°C to +40°C (23°F to 104°F) when it uses GE SFP optical modules with 40 km or longer transmission distance.</p> <p>When SFP+ copper cables or dedicated stack cables are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> <li>-5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM)</li> </ul> <p>When SFP+ AOC cables or 10GE SFP+ optical modules are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> <li>-5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM)</li> </ul>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	98010919

## 4.31.2 S5735S-L12P4S-A

### Version Mapping

[Table 4-1659](#) lists the mapping between the S5735S-L12P4S-A chassis and software versions.

**Table 4-1659** Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L12P4S-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-604** S5735S-L12P4S-A appearance





1	Twelve PoE+ 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module (applicable in V200R021C00 and later versions)</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions)</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1660](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1660** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1661](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1661** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used

Attribute	Description
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1662](#).

**Table 4-1662** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1663](#) describes the attributes of an ETH management port.

**Table 4-1663** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

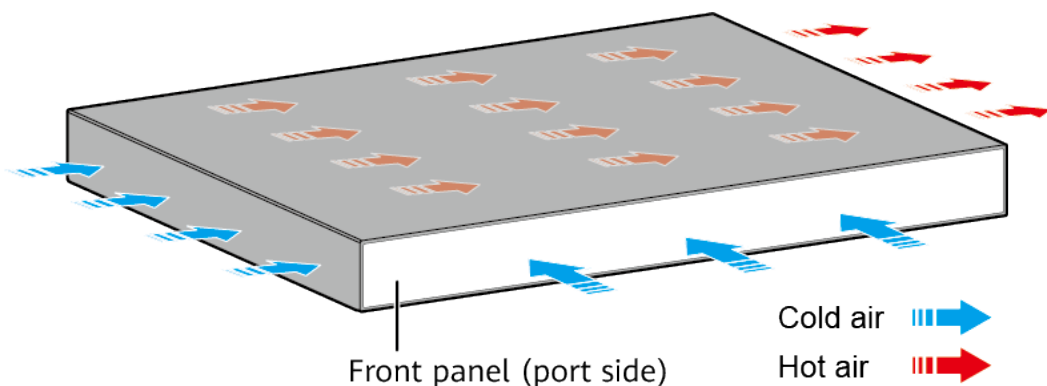
The S5735S-L12P4S-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735S-L12P4S-A has a built-in power module and does not support pluggable power modules. The built-in power module can provide 360 W PoE power, which ensures full PoE power on 12 ports in compliance with 802.3af or 802.3at.

## Heat Dissipation

The S5735S-L12P4S-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



#### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1664** lists technical specifications of the S5735S-L12P4S-A.

**Table 4-1664** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	85.52 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4.24 kg (9.35 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>• Not providing the PoE function: 49 W</li> <li>• 100% PoE loads: 441 W (PoE: 360 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	38 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.                     The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 57.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010923

### 4.31.3 S5735S-L24FT4S-A

#### Version Mapping

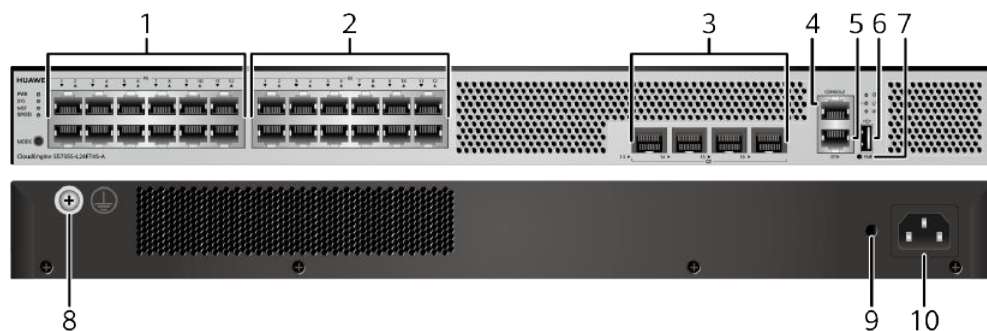
[Table 4-1665](#) lists the mapping between the S5735S-L24FT4S-A chassis and software versions.

**Table 4-1665** Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L24FT4S-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

#### Appearance and Structure

**Figure 4-605** S5735S-L24FT4S-A appearance



1	Twelve 10/100BASE-TX ports	2	Twelve 10/100/1000BASE-T ports
3	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module (applicable in V200R021C00 and later versions)</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (only used for stack connection, a maximum transmission distance of 0.4 km, OSXD22N00 not supported, applicable in V200R019C10 and later versions)</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>	4	One console port
5	One ETH management port	6	One USB port
7	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	8	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>



9	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	1 0	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .
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## Port Description

### 10/100BASE-TX port

A 10/100BASE-TX Ethernet electrical port sends and receives service data at 10/100 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1666](#) lists the attributes of a 10/100BASE-TX Ethernet electrical port.

**Table 4-1666** Attributes of a 10/100BASE-TX Ethernet electrical port

Attribute	Item
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1667](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1667** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1668](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1668** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1669](#).

**Table 4-1669** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1670](#) describes the attributes of an ETH management port.

**Table 4-1670** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5735S-L24FT4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L24FT4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735S-L24FT4S-A has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation

The S5735S-L24FT4S-A has no fans and uses natural heat dissipation.

## Technical Specifications

[Table 4-1671](#) lists technical specifications of the S5735S-L24FT4S-A.

**Table 4-1671** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	55.89 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4.08 kg (9 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum power consumption (100% throughput)	32 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	26 W
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p> <p>The operating temperature of the switch is -5°C to +40°C (23°F to 104°F) when it uses GE SFP optical modules with 40 km or longer transmission distance.</p> <p>When SFP+ copper cables or dedicated stack cables are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> <li>• -5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM)</li> </ul> <p>When SFP+ AOC cables or 10GE SFP+ optical modules are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> <li>• -5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM)</li> </ul>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>

Item	Description
Part number	98010917

## 4.31.4 S5735S-L24T4S-A

### Version Mapping

**Table 4-1672** lists the mapping between the S5735S-L24T4S-A chassis and software versions.

**Table 4-1672** Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L24T4S-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-606** S5735S-L24T4S-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module (applicable in V200R021C00 and later versions)</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (only used for stack connection, a maximum transmission distance of 0.4 km, OSXD22N00 not supported, applicable in V200R019C10 and later versions)</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1673](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1673** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1674](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1674** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used



Attribute	Description
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1675](#).

**Table 4-1675** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1676](#) describes the attributes of an ETH management port.

**Table 4-1676** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5735S-L24T4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L24T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735S-L24T4S-A has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation

The S5735S-L24T4S-A has no fans and uses natural heat dissipation.

## Technical Specifications

[Table 4-1677](#) lists technical specifications of the S5735S-L24T4S-A.

**Table 4-1677** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	92.82 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4.08 kg (9 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum power consumption (100% throughput)	34 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	28 W

Item	Description
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p> <p>The operating temperature of the switch is -5°C to +40°C (23°F to 104°F) when it uses GE SFP optical modules with 40 km or longer transmission distance.</p> <p>When SFP+ copper cables or dedicated stack cables are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> <li>-5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM)</li> </ul> <p>When SFP+ AOC cables or 10GE SFP+ optical modules are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> <li>-5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM)</li> </ul>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	98010915

## 4.31.5 S5735S-L24T4X-A

### Version Mapping

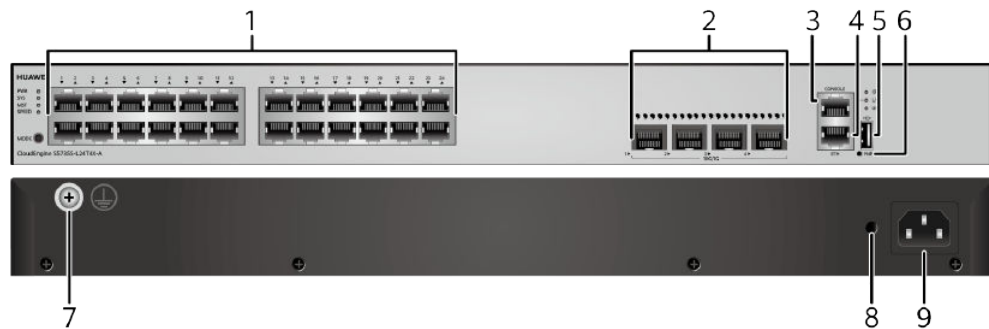
[Table 4-1678](#) lists the mapping between the S5735S-L24T4X-A chassis and software versions.

**Table 4-1678** Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L24T4X-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-607** S5735S-L24T4X-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port

5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1679](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1679** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1680](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1680** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1681](#).

**Table 4-1681** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1682](#) describes the attributes of an ETH management port.

**Table 4-1682** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5735S-L24T4X-A has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L24T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

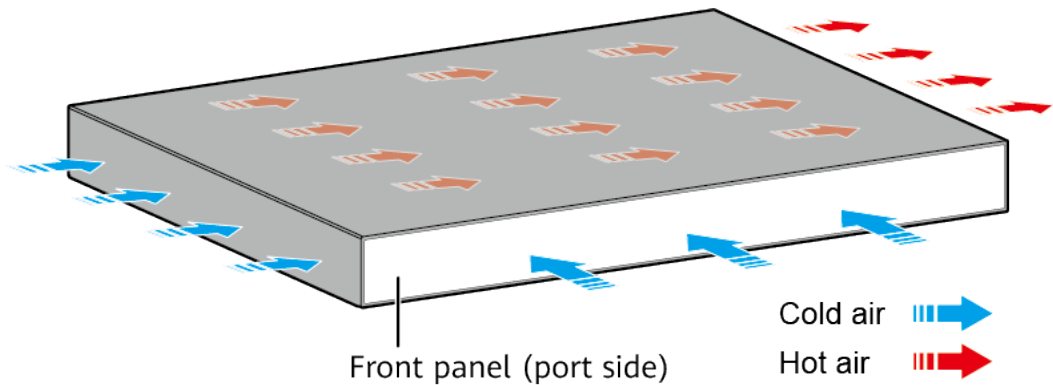
## Power Supply Configuration

The S5735S-L24T4X-A has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation

The S5735S-L24T4X-A has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.





**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1683** lists technical specifications of the S5735S-L24T4X-A.

**Table 4-1683** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	50.68 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4 kg (8.82 lb)

Item	Description
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>● AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>● High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>● High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	43 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>● Tested according to ATIS standard</li> <li>● EEE enabled</li> <li>● No PoE power consumption</li> </ul>	27 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The switch cannot be started when the ambient temperature is lower than 0°C (32°F).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 47.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010921

## 4.31.6 S5735S-L24P4S-A

### Version Mapping

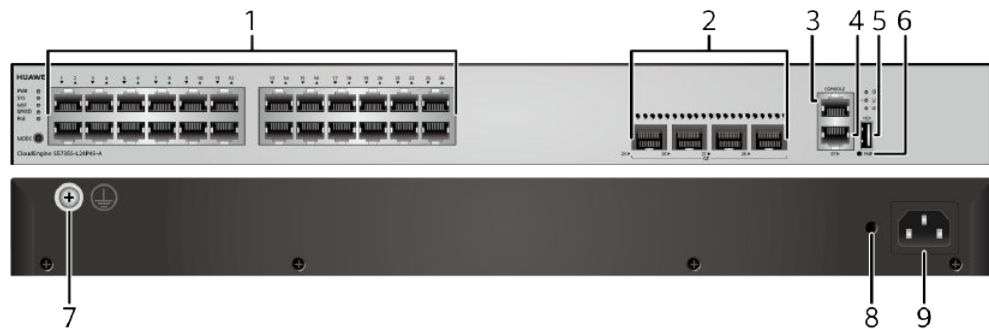
[Table 4-1684](#) lists the mapping between the S5735S-L24P4S-A chassis and software versions.

**Table 4-1684** Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L24P4S-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-608** S5735S-L24P4S-A appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• FE optical module (applicable in V200R021C00 and later versions)</li> <li>• GE optical module</li> <li>• GE-CWDM optical module</li> <li>• GE-DWDM optical module</li> <li>• GE copper module</li> <li>• 10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions)</li> <li>• 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)</li> <li>• 3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)</li> <li>• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1685](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1685** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1686](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1686** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used

Attribute	Description
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1687](#).

**Table 4-1687** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1688](#) describes the attributes of an ETH management port.

**Table 4-1688** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

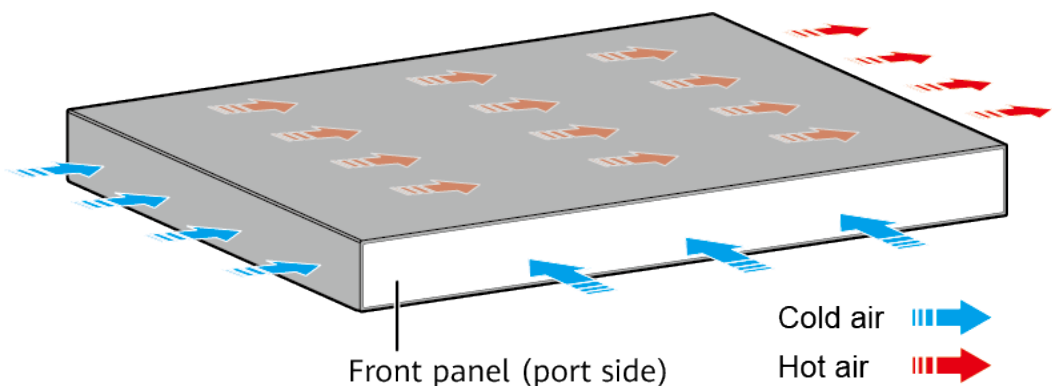
The S5735S-L24P4S-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735S-L24P4S-A has a built-in power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

## Heat Dissipation

The S5735S-L24P4S-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



#### NOTE

This figure only shows the airflow direction and does not depict the actual device.



## Technical Specifications

**Table 4-1689** lists technical specifications of the S5735S-L24P4S-A.

**Table 4-1689** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	92.2 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4.31 kg (9. lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>• Not providing the PoE function: 53 W</li> <li>• 100% PoE loads: 451 W (PoE: 380 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	39 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.                     The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 57.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010925

### 4.31.7 S5735S-L24P4X-A

#### Version Mapping

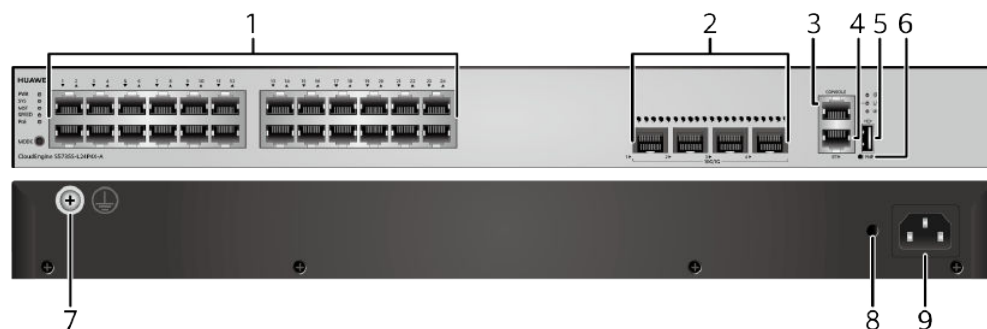
**Table 4-1690** lists the mapping between the S5735S-L24P4X-A chassis and software versions.

**Table 4-1690** Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L24P4X-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

#### Appearance and Structure

**Figure 4-609** S5735S-L24P4X-A appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1691](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1691** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1692](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1692** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1693](#).

**Table 4-1693** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1694](#) describes the attributes of an ETH management port.

**Table 4-1694** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

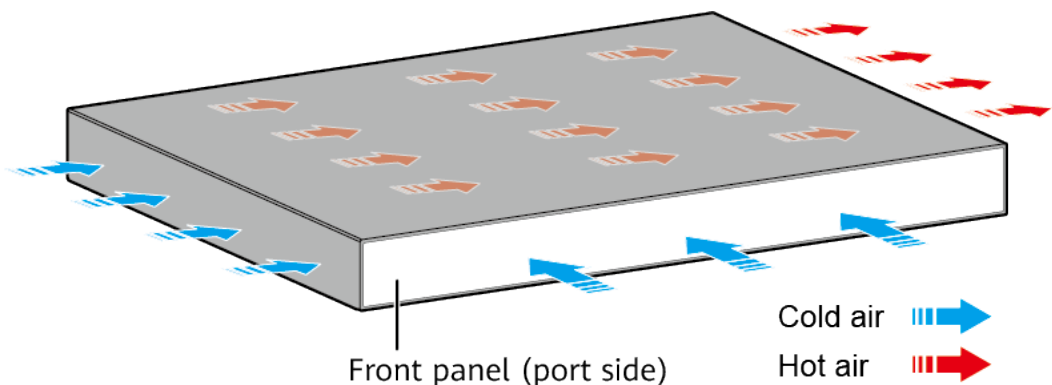
The S5735S-L24P4X-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735S-L24P4X-A has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

## Heat Dissipation

The S5735S-L24P4X-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1695](#) lists technical specifications of the S5735S-L24P4X-A.

**Table 4-1695** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.

Item	Description
Mean time between failures (MTBF)	57.07 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4.31 kg (9.5 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 56 W</li> <li>100% PoE loads: 458 W (PoE: 380 W)</li> </ul>



Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	43 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.                     The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.7 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010928

### 4.31.8 S5735S-L32ST4X-A

#### Version Mapping

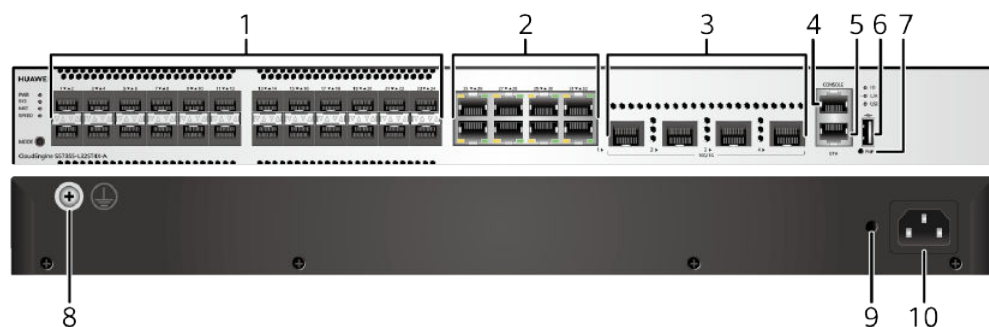
**Table 4-1696** lists the mapping between the S5735S-L32ST4X-A chassis and software versions.

**Table 4-1696** Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L32ST4X-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

#### Appearance and Structure

**Figure 4-610** S5735S-L32ST4X-A appearance



1	Twenty-four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b> (maximum transmission distance ≤ 40 km)</li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>	2	Eight 10/100/1000BASE-T ports
3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>	4	One console port
5	One ETH management port	6	One USB port
7	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	8	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .

9	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	1 0	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .
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## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-1697](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-1697** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1698](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1698** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1699](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1699** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1700](#).

**Table 4-1700** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1701](#) describes the attributes of an ETH management port.

**Table 4-1701** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

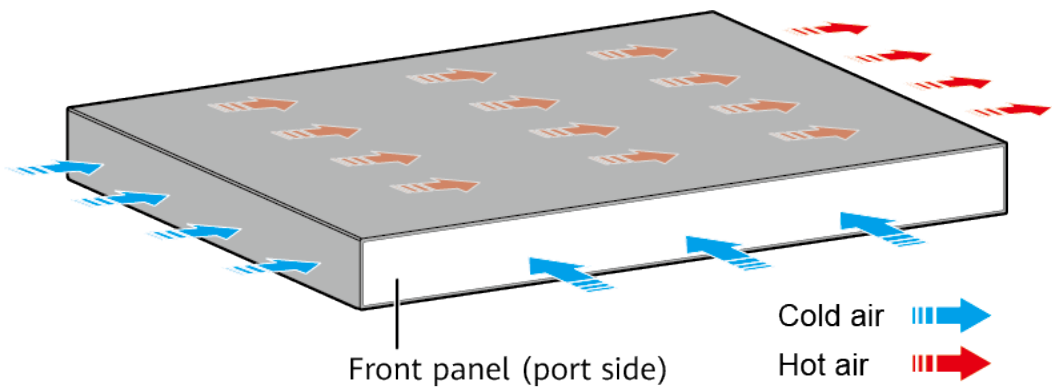
The S5735S-L32ST4X-A has the same types of indicators as the S5735-L32ST4X-A. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735S-L32ST4X-A has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation

The S5735S-L32ST4X-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1702](#) lists technical specifications of the S5735S-L32ST4X-A.

**Table 4-1702** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	85.87 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4.31 kg (9.5 lb)

Item	Description
Stack ports	Any 10/100/1000BASE-T ports, 100/1000BASE-X ports, or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>• High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>• AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>• High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	65 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	46 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)  <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).  The switch cannot be started when the ambient temperature is lower than 0°C (32°F).



Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010930

## 4.31.9 S5735S-L48FT4S-A

### Version Mapping

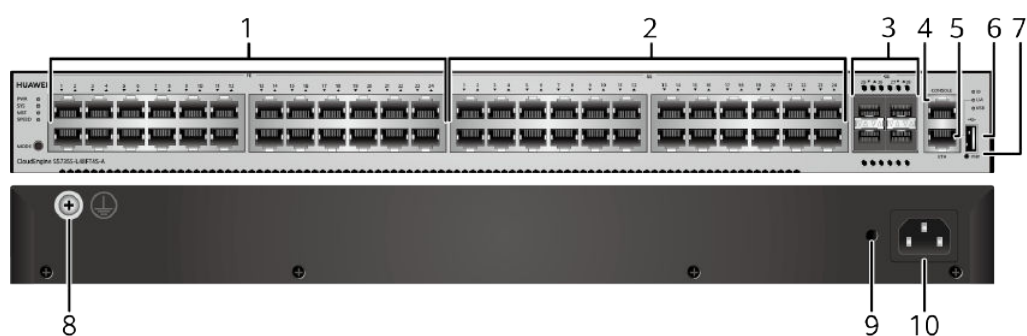
[Table 4-1703](#) lists the mapping between the S5735S-L48FT4S-A chassis and software versions.

**Table 4-1703** Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L48FT4S-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-611** S5735S-L48FT4S-A appearance



1	Twenty-four 10/100BASE-TX ports	2	Twenty-four 10/100/1000BASE-T ports
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3	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>● <b>FE optical module (applicable in V200R021C00 and later versions)</b></li> <li>● <b>GE optical module</b></li> <li>● <b>GE-CWDM optical module</b></li> <li>● <b>GE-DWDM optical module</b></li> <li>● <b>GE copper module</b></li> <li>● <b>10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions)</b></li> <li>● <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>● <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>	4	One console port
5	One ETH management port	6	One USB port
7	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	8	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>

9	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	1 0	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .
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## Port Description

### 10/100BASE-TX port

A 10/100BASE-TX Ethernet electrical port sends and receives service data at 10/100 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1704](#) lists the attributes of a 10/100BASE-TX Ethernet electrical port.

**Table 4-1704** Attributes of a 10/100BASE-TX Ethernet electrical port

Attribute	Item
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1705](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1705** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1706](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1706** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1707](#).

**Table 4-1707** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1708](#) describes the attributes of an ETH management port.

**Table 4-1708** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

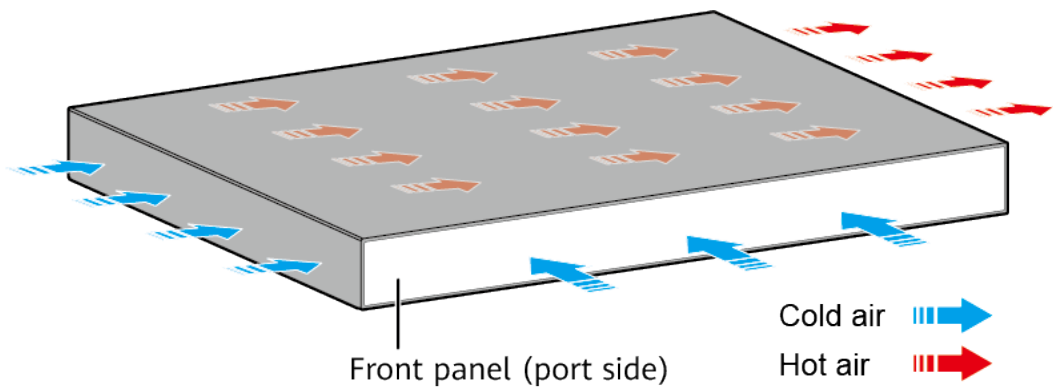
The S5735S-L48FT4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L48FT4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735S-L48FT4S-A has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation

The S5735S-L48FT4S-A has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1709** lists technical specifications of the S5735S-L48FT4S-A.

**Table 4-1709** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	50.68 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4.42 kg (9.75 lb)

Item	Description
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"><li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li><li>High-Voltage DC input: 240 V DC</li></ul>
Maximum voltage range	<ul style="list-style-type: none"><li>AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li><li>High-Voltage DC input: 190 V DC to 290 V DC</li></ul>
Maximum power consumption (100% throughput, full speed of fans)	44 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"><li>Tested according to ATIS standard</li><li>EEE enabled</li><li>No PoE power consumption</li></ul>	30 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).



Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010935

## 4.31.10 S5735S-L48T4S-A

### Version Mapping

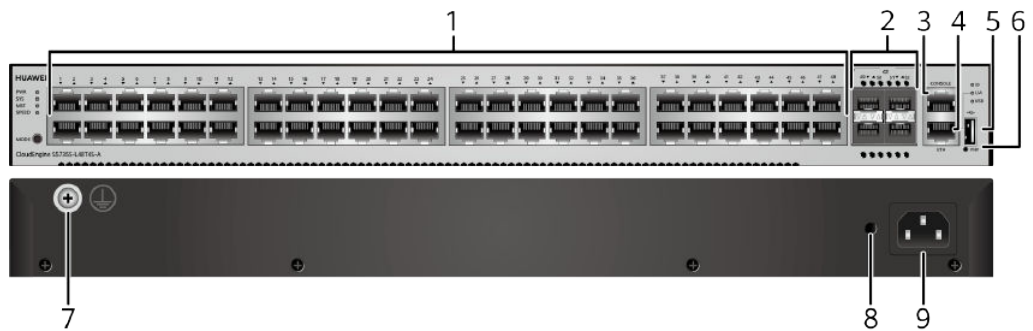
**Table 4-1710** lists the mapping between the S5735S-L48T4S-A chassis and software versions.

**Table 4-1710** Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L48T4S-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-612** S5735S-L48T4S-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module (applicable in V200R021C00 and later versions)</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions)</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1711](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1711** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1712](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1712** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used

Attribute	Description
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1713](#).

**Table 4-1713** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1714](#) describes the attributes of an ETH management port.

**Table 4-1714** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

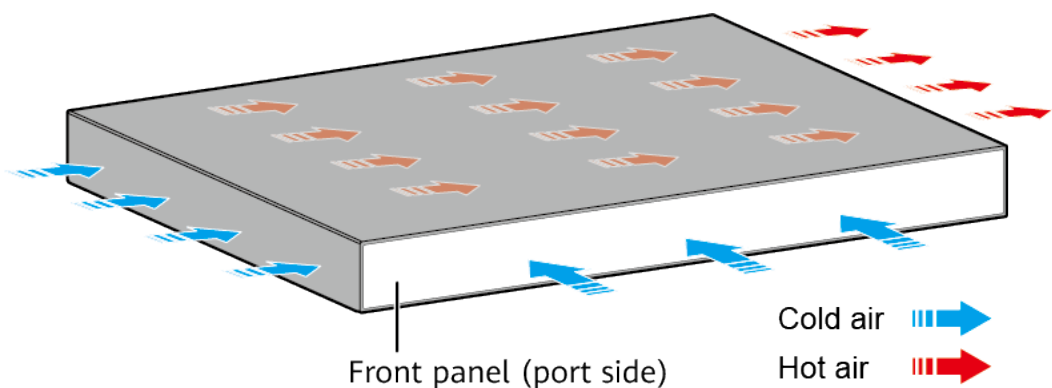
The S5735S-L48T4S-A has similar indicators to those on the S5735S-L12P4S-A except that the S5735S-L48T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735S-L48T4S-A has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation

The S5735S-L48T4S-A has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



#### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1715](#) lists technical specifications of the S5735S-L48T4S-A.

**Table 4-1715** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	46.36 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4.42 kg (9.75 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	53 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	37 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.                     The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing



Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010934

## 4.31.11 S5735S-L48T4X-A

### Version Mapping

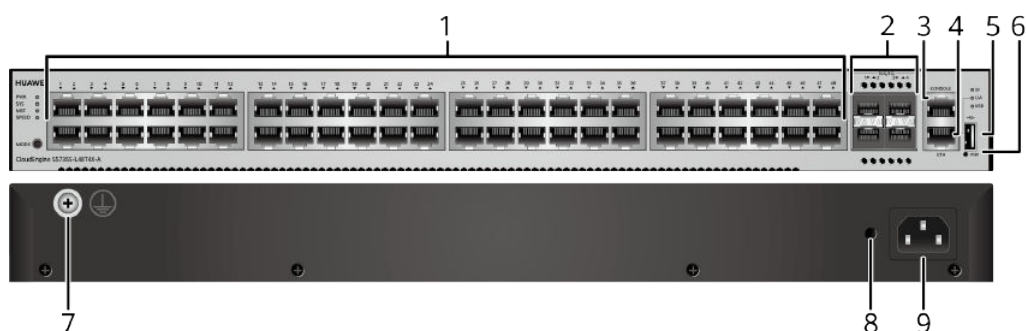
**Table 4-1716** lists the mapping between the S5735S-L48T4X-A chassis and software versions.

**Table 4-1716** Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L48T4X-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-613** S5735S-L48T4X-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1717](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1717** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1718](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1718** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1719](#).

**Table 4-1719** Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1720](#) describes the attributes of an ETH management port.

**Table 4-1720** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

**NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

### Indicator Description

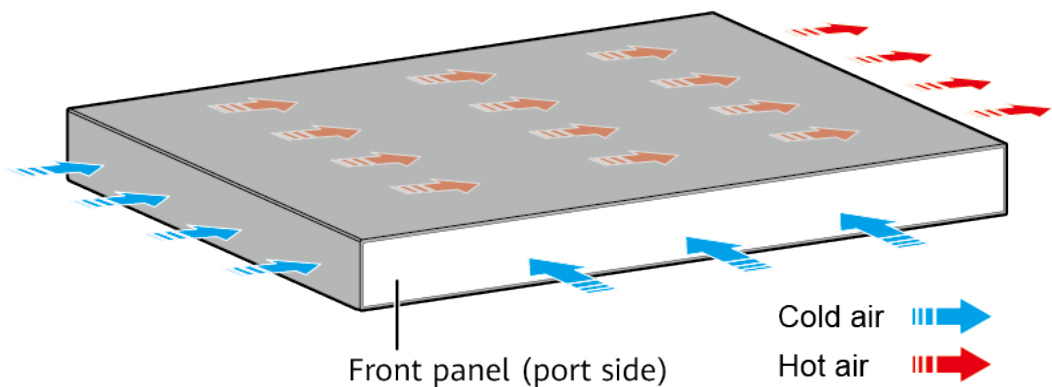
The S5735S-L48T4X-A has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L48T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

### Power Supply Configuration

The S5735S-L48T4X-A has a built-in AC power module and does not support pluggable power modules.

### Heat Dissipation

The S5735S-L48T4X-A has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

### Technical Specifications

[Table 4-1721](#) lists technical specifications of the S5735S-L48T4X-A.

**Table 4-1721** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	41.48 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4.42 kg (9.75 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	54 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"><li>• Tested according to ATIS standard</li><li>• EEE enabled</li><li>• No PoE power consumption</li></ul>	39 W
Operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p> <p>The operating temperature of the switch is -5°C to +45°C (23°F to 113°F) when it uses 10GE SFP+ optical modules with 40 km or longer transmission distances.</p>
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"><li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li><li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li><li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li></ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010937

## 4.31.12 S5735S-L48P4S-A

### Version Mapping

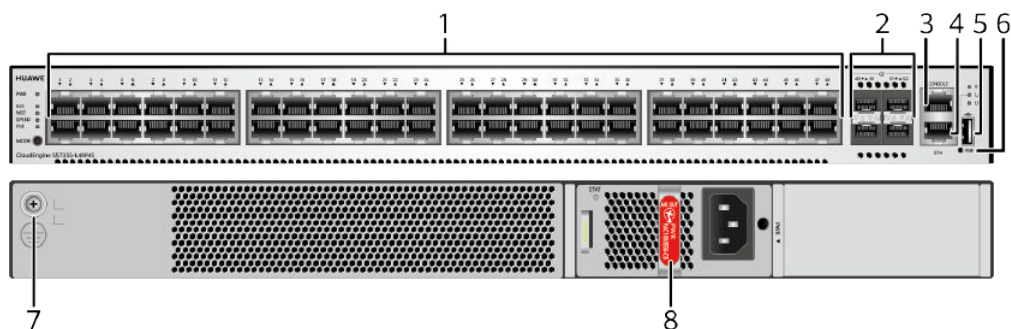
[Table 4-1722](#) lists the mapping between the S5735S-L48P4S-A chassis and software versions.

**Table 4-1722** Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L48P4S-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-614** S5735S-L48P4S-A appearance





1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module (applicable in V200R021C00 and later versions)</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions)</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Power module slot</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> </ul>
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1723](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1723** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1724](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1724** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1725](#).

**Table 4-1725** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1726](#) describes the attributes of an ETH management port.

**Table 4-1726** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3

Attribute	Description
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5735S-L48P4S-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

## Power Supply Configuration

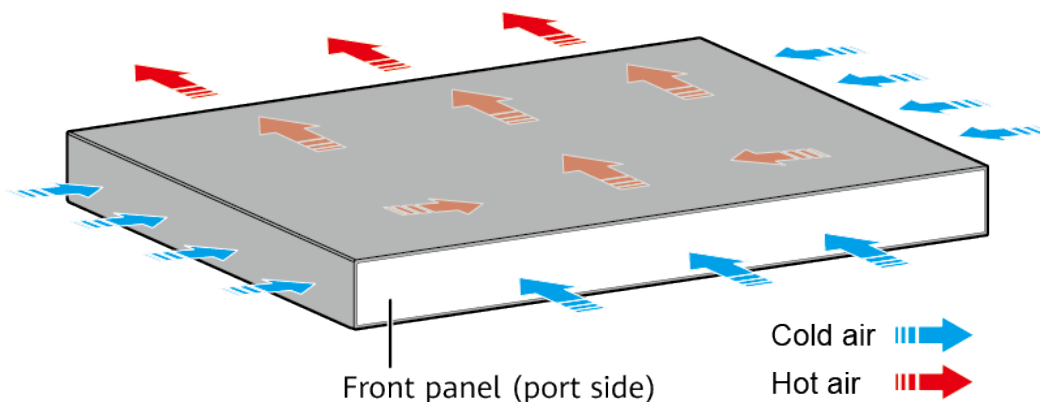
The S5735S-L48P4S-A is a PoE switch. It has one power module slot, which can have a 1000 W PoE power module installed. [Table 4-1727](#) lists its power supply configurations.

**Table 4-1727** Power supply configurations

Power Module	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	874 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 29</li> </ul>
1000 W AC (110 V)	779 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 48</li> <li>● 802.3at (30 W per port): 25</li> </ul>

## Heat Dissipation

The S5735S-L48P4S-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1728](#) lists technical specifications of the S5735S-L48P4S-A.

**Table 4-1728** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	61.7 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>● Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>● Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)</li> </ul>
Weight (with packaging)	8.7 kg (19.18 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> <li>● AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>● High-Voltage DC input: 240 V DC</li> <li>● DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>● High-Voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>● Not providing the PoE function: 75 W</li> <li>● 100% PoE loads: 911 W (PoE: 874 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>● Tested according to ATIS standard</li> <li>● EEE enabled</li> <li>● No PoE power consumption</li> </ul>	58 W

Item	Description
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010946

## 4.31.13 S5735S-L48P4X-A

### Version Mapping

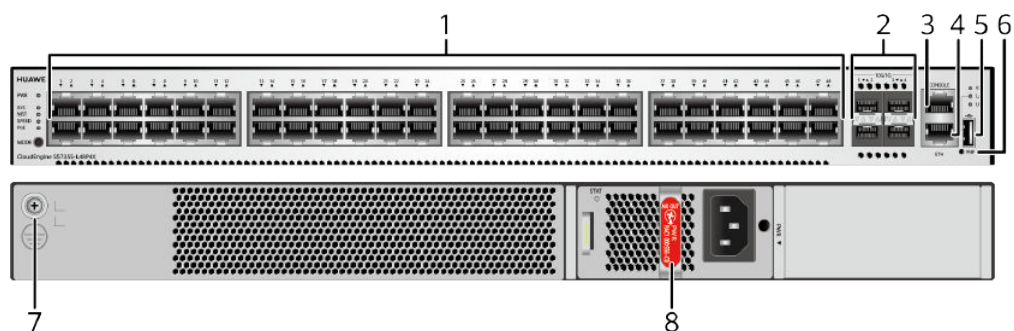
**Table 4-1729** lists the mapping between the S5735S-L48P4X-A chassis and software versions.

**Table 4-1729** Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L48P4X-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-615** S5735S-L48P4X-A appearance





1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Power module slot</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> </ul>
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1730](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1730** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1731](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1731** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1732](#).

**Table 4-1732** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1733](#) describes the attributes of an ETH management port.

**Table 4-1733** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5735S-L48P4X-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735S-L48P4X-A is a PoE switch. It has one power module slot, which can have a 1000 W PoE power module installed. [Table 4-1734](#) lists its power supply configurations.

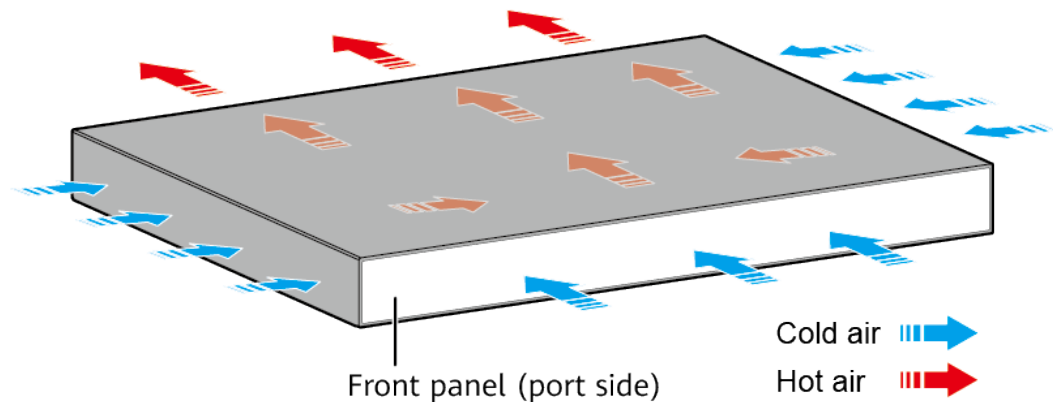
**Table 4-1734** Power supply configurations

Power Module	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	874 W	<ul style="list-style-type: none"><li>802.3af (15.4 W per port): 48</li><li>802.3at (30 W per port): 29</li></ul>

Power Module	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (110 V)	779 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 25</li> </ul>

## Heat Dissipation

The S5735S-L48P4X-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1735](#) lists technical specifications of the S5735S-L48P4X-A.

**Table 4-1735** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	61.7 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV

Item	Description
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)</li> </ul>
Weight (with packaging)	8.7 kg (19.18 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>Not providing the PoE function: 80 W</li> <li>100% PoE loads: 914 W (PoE: 874 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	59 W

Item	Description
Operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010945

## 4.32 S5735-L1

### 4.32.1 S5735-L8T4S-A1 (98011284)

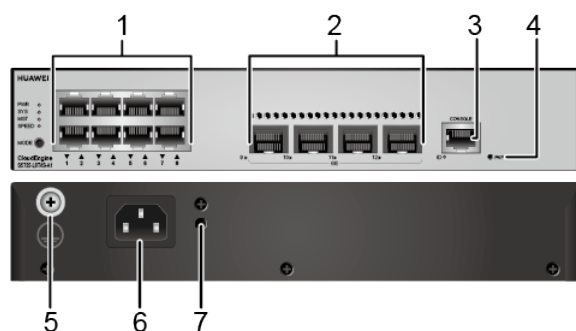
#### Overview

**Table 4-1736** Basic information about the S5735-L8T4S-A1

Item	Details
Description	S5735-L8T4S-A1 (8*10/100/1000BASE-T ports, 4*GE SFP ports, AC power)
Part Number	98011284
Model	S5735-L8T4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

#### Components

**Figure 4-616** S5735-L8T4S-A1 appearance



1	Eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports
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3	One console port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	6	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .
7	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	-	-

## Ports

**Table 4-1737** Ports on the S5735-L8T4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>

Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> <li>● <b>FE SFP/eSFP optical modules (applicable in V200R021C00 and later versions)</b></li> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>Industrial optical modules (only optical modules with 1 Gbit/s transmission speed and transmission distances less than or equal to 10 km are supported)</b></li> <li>● <b>10GE SFP+ optical modules (only used for stack connection, OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules (only used for stack connection)</b></li> <li>● <b>10GE-DWDM SFP+ optical modules (only</b></li> </ul>

Port	Connector Type	Description	Available Components
			<p><b>used for stack connection)</b></p> <ul style="list-style-type: none"> <li>• <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

## Indicators and Buttons

The S5735-L8T4S-A1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L8T4S-A1 does not have USB and PoE mode indicators. For details, see the S5735-L24P4X-A1.

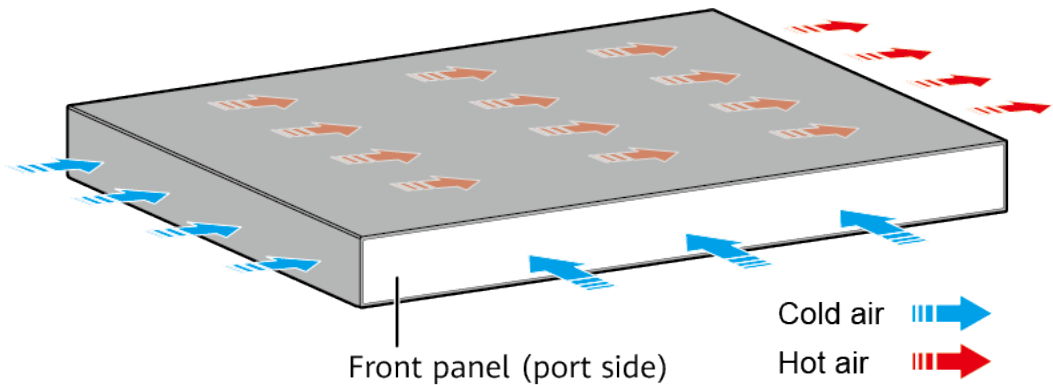
## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1738** Technical specifications of the S5735-L8T4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.84 in. x 7.1 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 250.0 mm x 187.0 mm (1.72 in. x 9.84 in. x 7.36 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 370.0 mm x 380.0 mm (3.54 in. x 14.57 in. x 14.96 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	1.38 kg (3.04 lb)
Weight with packaging [kg(lb)]	2.02 kg (4.45 lb)
Typical power consumption [W]	21.2 W
Typical heat dissipation [BTU/hour]	72.34 BTU/hour
Maximum power consumption [W]	26.3 W
Maximum heat dissipation [BTU/hour]	89.74 BTU/hour
Static power consumption [W]	14.8 W
MTBF [years]	71.82 years
MTTR [hours]	2 hours
Availability	> 0.99999

Item	Specification
Noise at normal temperature (acoustic power) [dB(A)]	43 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.5 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) (0 m to 1800 m altitude, non-industrial optical modules) -5°C to +55°C (23°F to 131°F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F). The operating temperature ranges from -5°C to +45°C (23°F to 113°F) when optical modules with transmission distances greater than or equal to 70 km are used.
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 264 V AC; 45 Hz to 65 Hz
Maximum input current [A]	0.8 A

Item	Specification
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.32.2 S5735-L8T4S-A1 (98011284-001)

### Overview

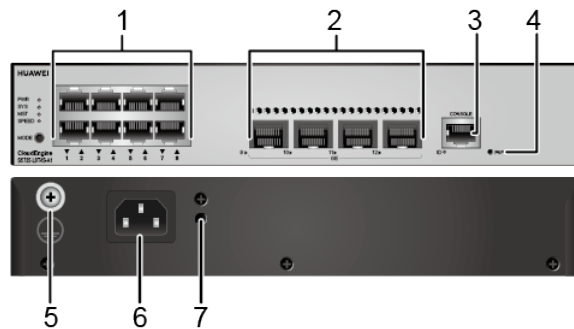
**Table 4-1739** Basic information about the S5735-L8T4S-A1

Item	Details
Description	S5735-L8T4S-A1 (8*10/100/1000BASE-T ports, 4*GE SFP ports, AC power)
Part Number	98011284-001
Model	S5735-L8T4S-A1
First supported version	V200R020C10

Item	Details
Remarks	Stacking is not supported. Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

Figure 4-617 S5735-L8T4S-A1 appearance



1	Eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports
3	One console port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .

7	Jack for AC power cable locking strap  <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	-	-
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## Ports

**Table 4-1740** Ports on the S5735-L8T4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>



Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"><li>• <b>FE SFP/eSFP optical modules (applicable in V200R021C00 and later versions)</b></li><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>Industrial optical modules (only optical modules with 1 Gbit/s transmission speed and transmission distances less than or equal to 10 km are supported)</b></li></ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

## Indicators and Buttons

The S5735-L8T4S-A1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L8T4S-A1 does not have USB and PoE mode indicators. For details, see the S5735-L24P4X-A1.

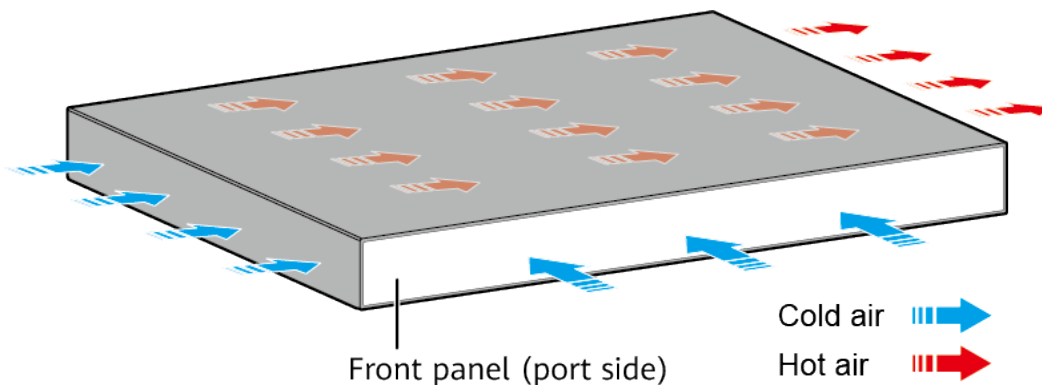
## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1741** Technical specifications of the S5735-L8T4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.84 in. x 7.1 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 250.0 mm x 187.0 mm (1.72 in. x 9.84 in. x 7.36 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 370.0 mm x 380.0 mm (3.54 in. x 14.57 in. x 14.96 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	1.38 kg (3.04 lb)
Weight with packaging [kg(lb)]	2.02 kg (4.45 lb)
Typical power consumption [W]	21.2 W
Typical heat dissipation [BTU/hour]	72.34 BTU/hour
Maximum power consumption [W]	26.3 W

Item	Specification
Maximum heat dissipation [BTU/hour]	89.74 BTU/hour
Static power consumption [W]	14.8 W
MTBF [years]	71.82 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	43 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.5 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) (0 m to 1800 m altitude, non-industrial optical modules) -5°C to +55°C (23°F to 131°F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F). The operating temperature ranges from -5°C to +45°C (23°F to 113°F) when optical modules with transmission distances greater than or equal to 70 km are used.
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)

Item	Specification
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 264 V AC; 45 Hz to 65 Hz
Maximum input current [A]	0.8 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.32.3 S5735-L8P4S-A1 (98011295)

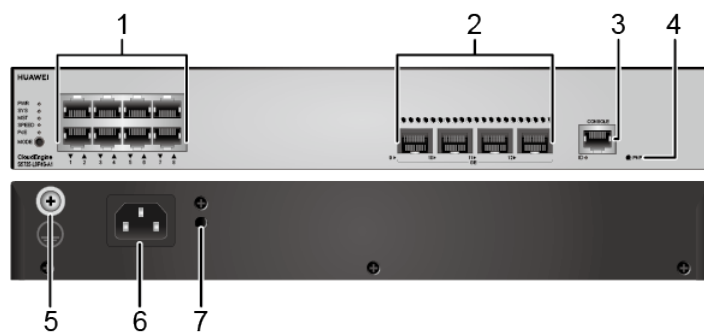
## Overview

**Table 4-1742** Basic information about the S5735-L8P4S-A1

Item	Details
Description	S5735-L8P4S-A1 (8*10/100/1000BASE-T ports, 4*GE SFP ports, PoE+, AC power)
Part Number	98011295
Model	S5735-L8P4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

**Figure 4-618** S5735-L8P4S-A1 appearance



1	Eight 10/100/1000BASE-T PoE+ ports	2	Four 1000BASE-X ports
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3	One console port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .
7	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	-	-

## Ports

**Table 4-1743** Ports on the S5735-L8P4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> <li>● <b>FE SFP/eSFP optical modules (applicable in V200R021C00 and later versions)</b></li> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>Industrial optical modules (only optical modules with 1 Gbit/s transmission speed and transmission distances less than or equal to 10 km are supported)</b></li> <li>● <b>10GE SFP+ optical modules (only used for stack connection, OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules (only used for stack connection)</b></li> <li>● <b>10GE-DWDM SFP+ optical modules (only</b></li> </ul>

Port	Connector Type	Description	Available Components
			<p><b>used for stack connection)</b></p> <ul style="list-style-type: none"> <li>• <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

## Indicators and Buttons

The S5735-L8P4S-A1 has the same types of indicators as the S5735-L24P4X-A1. For details, see the S5735-L24P4X-A1.

## Power Supply System

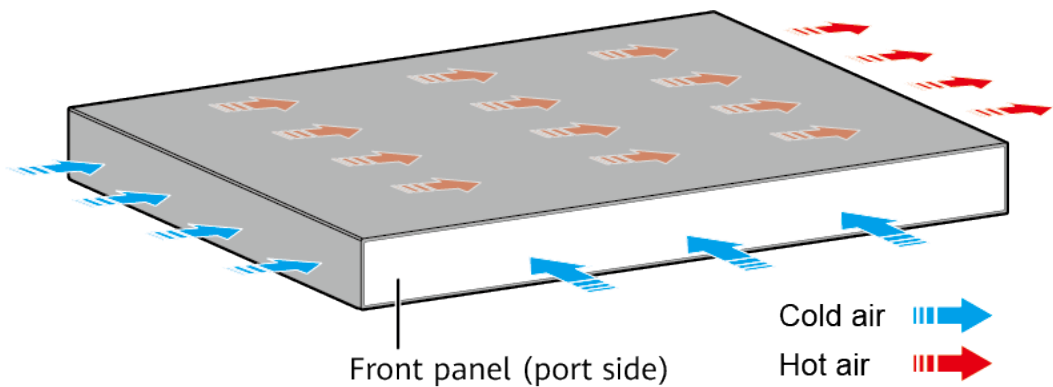
The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at.

## Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.





 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1744** Technical specifications of the S5735-L8P4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 300.0 mm x 220.0 mm (1.72 in. x 11.81 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 300.0 mm x 227.0 mm (1.72 in. x 11.81 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	110.0 mm x 435.0 mm x 360.0 mm (4.33 in. x 17.13 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.25 kg (4.96 lb)
Weight with packaging [kg(lb)]	3.17 kg (6.99 lb)
Typical power consumption [W]	28.4 W
Typical heat dissipation [BTU/hour]	96.9 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 38.6 W</li> <li>Full PoE load: 162.6 W (PoE: 124 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 131.71</li> <li>Full PoE load: 554.81</li> </ul>
Static power consumption [W]	22.6 W

Item	Specification
MTBF [years]	66.56 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	42.2 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	30.5 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.), mapping non-industrial optical modules</p> <p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.), mapping industrial optical modules with transmission distances less than or equal to 10 km</p>
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p> <p>The operating temperature ranges from -5°C to +45°C (23°F to 113°F) when optical modules with transmission distances greater than or equal to 70 km are used.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH, non-condensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in

Item	Specification
Rated input voltage [V]	100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	3 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode; $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Air cooling heat dissipation and intelligent speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

#### 4.32.4 S5735-L8P4S-A1 (98011295-001)

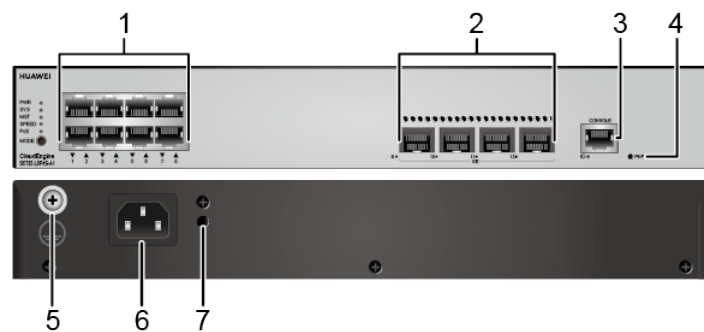
## Overview

**Table 4-1745** Basic information about the S5735-L8P4S-A1

Item	Details
Description	S5735-L8P4S-A1 (8*10/100/1000BASE-T ports, 4*GE SFP ports, PoE+, AC power)
Part Number	98011295-001
Model	S5735-L8P4S-A1
First supported version	V200R020C10
Remarks	Stacking is not supported. Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

**Figure 4-619** S5735-L8P4S-A1 appearance



1	Eight 10/100/1000BASE-T PoE+ ports	2	Four 1000BASE-X ports
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3	One console port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .
7	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	-	-

## Ports

**Table 4-1746** Ports on the S5735-L8P4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"><li>• <b>FE SFP/eSFP optical modules (applicable in V200R021C00 and later versions)</b></li><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>Industrial optical modules (only optical modules with 1 Gbit/s transmission speed and transmission distances less than or equal to 10 km are supported)</b></li></ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

## Indicators and Buttons

The S5735-L8P4S-A1 has the same types of indicators as the S5735-L24P4X-A1. For details, see the S5735-L24P4X-A1.

## Power Supply System

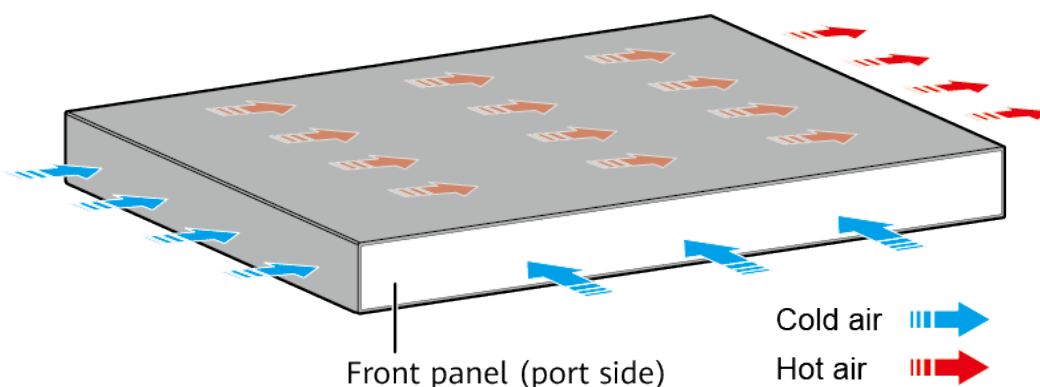
The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures

full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at.

## Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1747** Technical specifications of the S5735-L8P4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 300.0 mm x 220.0 mm (1.72 in. x 11.81 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 300.0 mm x 227.0 mm (1.72 in. x 11.81 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	110.0 mm x 435.0 mm x 360.0 mm (4.33 in. x 17.13 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.25 kg (4.96 lb)
Weight with packaging [kg(lb)]	3.17 kg (6.99 lb)

Item	Specification
Typical power consumption [W]	28.4 W
Typical heat dissipation [BTU/hour]	96.9 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 38.6 W</li> <li>Full PoE load: 162.6 W (PoE: 124 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 131.71</li> <li>Full PoE load: 554.81</li> </ul>
Static power consumption [W]	22.6 W
MTBF [years]	66.56 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	42.2 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	30.5 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0–1800 m (0–5906 ft.), mapping non-industrial optical modules  -5°C to +55°C (23°F to 131°F) at an altitude of 0–1800 m (0–5906 ft.), mapping industrial optical modules with transmission distances less than or equal to 10 km



Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p> <p>The operating temperature ranges from -5°C to +45°C (23°F to 113°F) when optical modules with transmission distances greater than or equal to 70 km are used.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH, non-condensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	3 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ±7 kV
Power supply surge protection [kV]	±6 kV in differential mode; ±6 kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in

Item	Specification
Heat dissipation mode	Air cooling heat dissipation and intelligent speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.32.5 S5735-L8T4X-A1

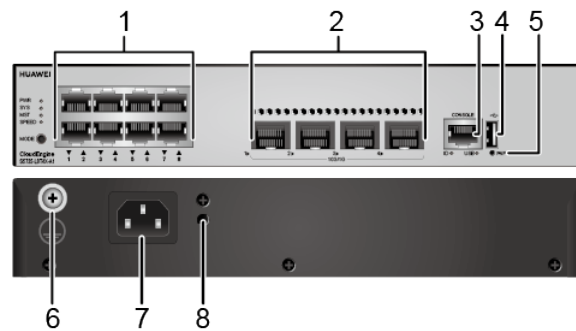
### Overview

**Table 4-1748** Basic information about the S5735-L8T4X-A1

Item	Details
Description	S5735-L8T4X-A1 (8*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)
Part Number	98011282
Model	S5735-L8T4X-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

Figure 4-620 S5735-L8T4X-A1 appearance



1	Eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port
5	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .
7	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.

## Ports

**Table 4-1749** Ports on the S5735-L8T4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE -T port	RJ45	A 10/100/1000BASE -T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>Industrial optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-</b></li> </ul>

Port	Connector Type	Description	Available Components
			<a href="#">configuration stacking</a> )
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>
USB port	USB 2.0 Type A	The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.  USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.	USB flash drive

## Indicators and Buttons

The S5735-L8T4X-A1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L8T4X-A1 does not have a PoE mode indicator. For details, see the S5735-L24P4X-A1.

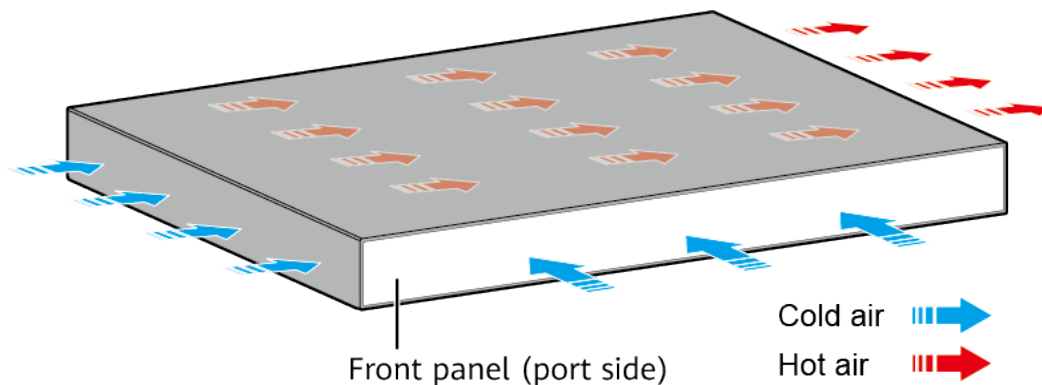
## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1750** Technical specifications of the S5735-L8T4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.84 in. x 7.1 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 250.0 mm x 187.0 mm (1.72 in. x 9.84 in. x 7.36 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 370.0 mm x 380.0 mm (3.54 in. x 14.57 in. x 14.96 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	1.44 kg (3.18 lb)
Weight with packaging [kg(lb)]	2.08 kg (4.59 lb)
Typical power consumption [W]	21.1 W
Typical heat dissipation [BTU/hour]	72 BTU/hour
Maximum power consumption [W]	26.3 W

Item	Specification
Maximum heat dissipation [BTU/hour]	89.74 BTU/hour
Static power consumption [W]	14.6 W
MTBF [years]	67.07 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	43 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.5 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) (0 m to 1800 m altitude, non-industrial optical modules) -5°C to +55°C (23°F to 131°F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F). The operating temperature ranges from -5°C to +45°C (23°F to 113°F) when optical modules with transmission distances greater than or equal to 70 km are used.
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)



Item	Specification
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 264 V AC; 45 Hz to 65 Hz
Maximum input current [A]	0.8 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.32.6 S5735-L8P4X-A1

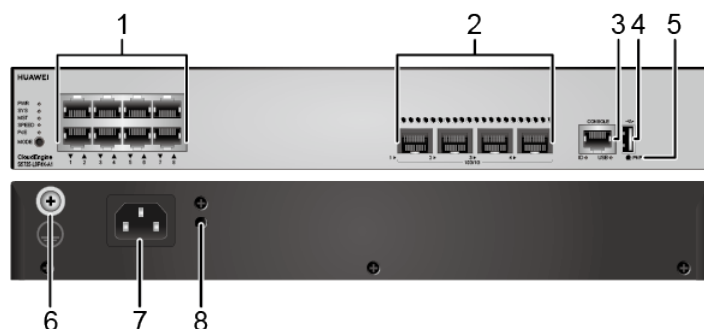
## Overview

**Table 4-1751** Basic information about the S5735-L8P4X-A1

Item	Details
Description	S5735-L8P4X-A1 (8*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power)
Part Number	98011291
Model	S5735-L8P4X-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

**Figure 4-621** S5735-L8P4X-A1 appearance



1	Eight 10/100/1000BASE-T PoE+ ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port

5	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>
7	<p>AC socket</p> <p><b>NOTE</b></p> <p>It is used with an <b>AC power cable</b>.</p>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b></p> <p>The AC power cable locking strap is not delivered with the switch.</p>

## Ports

**Table 4-1752** Ports on the S5735-L8P4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	<p>A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.</p> <p>The port supports the PoE function.</p>	<b>Ethernet cable</b>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules</b></li> <li>● <b>10GE-DWDM SFP+ optical modules</b></li> <li>● <b>Industrial optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li> <li>● <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables</b></li> <li>● <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-</b></li> </ul>

Port	Connector Type	Description	Available Components
			<b>configuration stacking)</b>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>
USB port	USB 2.0 Type A	The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.  USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.	USB flash drive

## Indicators and Buttons

The S5735-L8P4X-A1 has the same types of indicators as the S5735-L24P4X-A1. For details, see the S5735-L24P4X-A1.

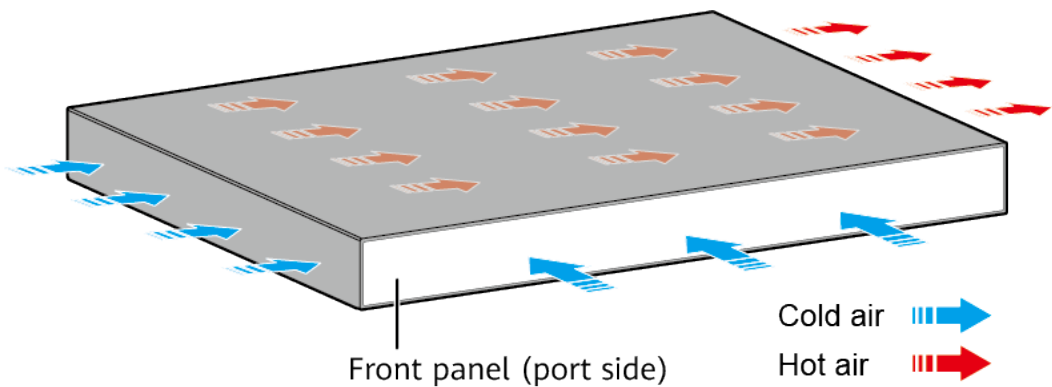
## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at.

## Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1753** Technical specifications of the S5735-L8P4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 300.0 mm x 220.0 mm (1.72 in. x 11.8 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 300.0 mm x 227.0 mm (1.72 in. x 11.8 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	110.0 mm x 435.0 mm x 360.0 mm (4.33 in. x 17.13 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.25 kg (4.96 lb)
Weight with packaging [kg(lb)]	3.17 kg (7 lb)
Typical power consumption [W]	28.7 W
Typical heat dissipation [BTU/hour]	97.93 BTU/hour

Item	Specification
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>• Not providing the PoE function: 39.1 W</li> <li>• 100% PoE loads: 163.1 W (PoE: 124 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>• Not providing the PoE function: 133.41</li> <li>• 100% PoE loads: 556.51</li> </ul>
Static power consumption [W]	22.6 W
MTBF [years]	62.46 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	42.2 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	30.5 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	<p>-5°C to +50°C (23°F to 122°F) (0 m to 1800 m altitude, non-industrial optical modules)</p> <p>-5°C to +55°C (23°F to 131°F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)</p>
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p> <p>The operating temperature ranges from -5°C to +45°C (23°F to 113°F) when optical modules with transmission distances greater than or equal to 70 km are used.</p>

Item	Specification
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	3 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ±7 kV
Power supply surge protection [kV]	±6 kV in differential mode, ±6 kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification



## 4.32.7 S5735-L24T4S-A1 (98011306)

### Overview

**Table 4-1754** Basic information about the S5735-L24T4S-A1

Item	Details
Description	S5735-L24T4S-A1 (24*10/100/1000BASE-T ports, 4*GE SFP ports, AC power)
Part Number	98011306
Model	S5735-L24T4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

### Components

**Figure 4-622** S5735-L24T4S-A1 appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports
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3	One console port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
7	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Ports

**Table 4-1755** Ports on the S5735-L24T4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> <li>● <b>FE SFP/eSFP optical modules (applicable in V200R021C00 and later versions)</b></li> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>Industrial optical modules (only optical modules with 1 Gbit/s transmission speed and transmission distances less than or equal to 10 km are supported)</b></li> <li>● <b>10GE SFP+ optical modules (only used for stack connection, OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules (only used for stack connection)</b></li> <li>● <b>10GE-DWDM SFP+ optical modules (only</b></li> </ul>

Port	Connector Type	Description	Available Components
			<p><b>used for stack connection)</b></p> <ul style="list-style-type: none"> <li>• <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

## Indicators and Buttons

The S5735-L24T4S-A1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L24T4S-A1 does not have USB and PoE mode indicators. For details, see the S5735-L24P4X-A1.

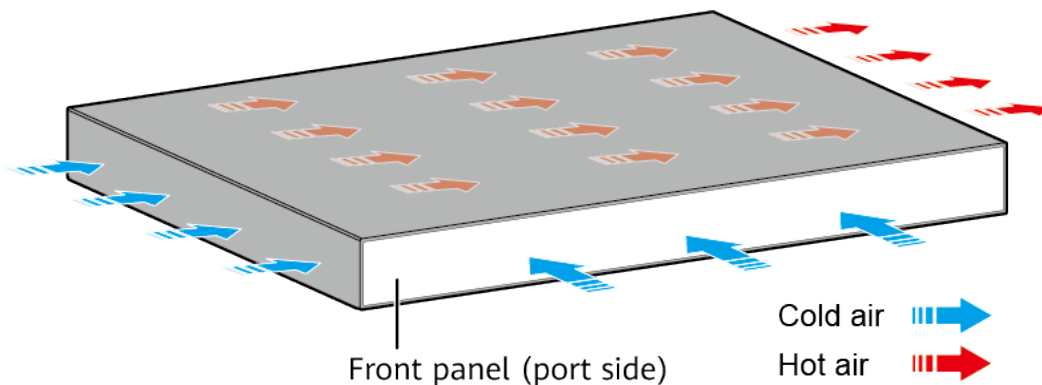
## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1756** Technical specifications of the S5735-L24T4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.45 kg (5.4 lb)
Weight with packaging [kg(lb)]	3.34 kg (7.36 lb)
Typical power consumption [W]	32.7 W
Typical heat dissipation [BTU/hour]	111.58 BTU/hour
Maximum power consumption [W]	47.6 W
Maximum heat dissipation [BTU/hour]	162.42 BTU/hour
Static power consumption [W]	18.4 W
MTBF [years]	66.16 years
MTTR [hours]	2 hours
Availability	> 0.99999

Item	Specification
Noise at normal temperature (acoustic power) [dB(A)]	39 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) (0 m to 1800 m altitude, non-industrial optical modules) -5°C to +55°C (23°F to 131°F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F). The operating temperature ranges from -5°C to +45°C (23°F to 113°F) when optical modules with transmission distances greater than or equal to 70 km are used.
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>High-voltage DC input: 110 V DC to 250 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"><li>AC input: 90 V AC to 264 V AC; 47 Hz to 63 Hz</li><li>High-voltage DC input: 88 V DC to 300 V DC</li></ul>
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

#### 4.32.8 S5735-L24T4S-A1 (98011306-001)

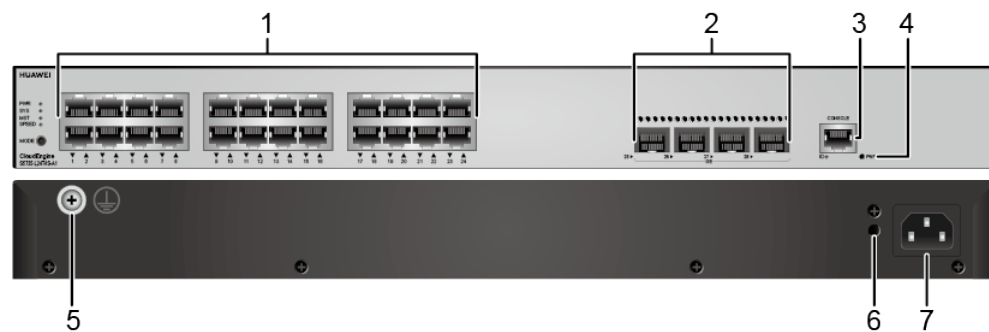
## Overview

**Table 4-1757** Basic information about the S5735-L24T4S-A1

Item	Details
Description	S5735-L24T4S-A1 (24*10/100/1000BASE-T ports, 4*GE SFP ports, AC power)
Part Number	98011306-001
Model	S5735-L24T4S-A1
First supported version	V200R020C10
Remarks	Stacking is not supported. Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

**Figure 4-623** S5735-L24T4S-A1 appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports
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3	One console port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
7	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Ports

**Table 4-1758** Ports on the S5735-L24T4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> <li>• <b>FE SFP/eSFP optical modules (applicable in V200R021C00 and later versions)</b></li> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>Industrial optical modules (only optical modules with 1 Gbit/s transmission speed and transmission distances less than or equal to 10 km are supported)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

## Indicators and Buttons

The S5735-L24T4S-A1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L24T4S-A1 does not have USB and PoE mode indicators. For details, see the S5735-L24P4X-A1.

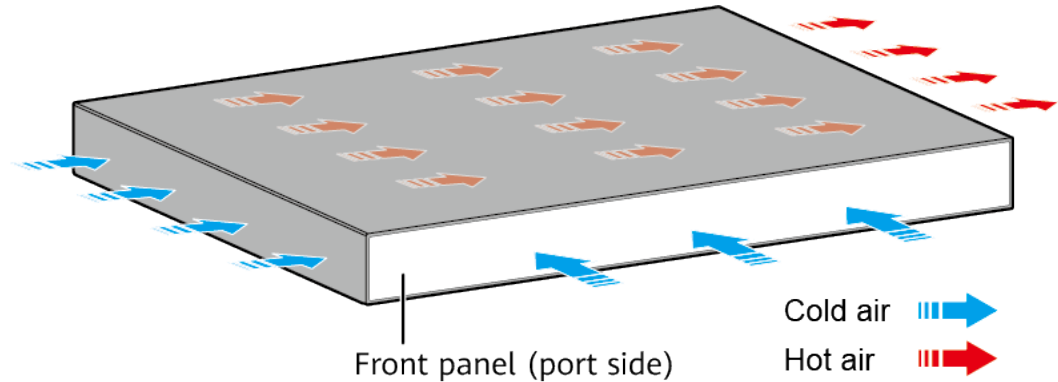
## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1759** Technical specifications of the S5735-L24T4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)  Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.45 kg (5.4 lb)
Weight with packaging [kg(lb)]	3.34 kg (7.36 lb)
Typical power consumption [W]	32.7 W
Typical heat dissipation [BTU/hour]	111.58 BTU/hour
Maximum power consumption [W]	47.6 W

Item	Specification
Maximum heat dissipation [BTU/hour]	162.42 BTU/hour
Static power consumption [W]	18.4 W
MTBF [years]	66.16 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	39 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) (0 m to 1800 m altitude, non-industrial optical modules) -5°C to +55°C (23°F to 131°F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F). The operating temperature ranges from -5°C to +45°C (23°F to 113°F) when optical modules with transmission distances greater than or equal to 70 km are used.
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)

Item	Specification
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>High-voltage DC input: 110 V DC to 250 V DC</li> </ul>
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC; 47 Hz to 63 Hz</li> <li>High-voltage DC input: 88 V DC to 300 V DC</li> </ul>
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.32.9 S5735-L24P4S-A1 (98011321)

## Overview

**Table 4-1760** Basic information about the S5735-L24P4S-A1

Item	Details
Description	S5735-L24P4S-A1 (24*10/100/1000BASE-T ports, 4*GE SFP ports, PoE+, AC power)
Part Number	98011321
Model	S5735-L24P4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

**Figure 4-624** S5735-L24P4S-A1 appearance



1	Twenty-four 10/100/1000BASE-T PoE+ ports	2	Four 1000BASE-X ports
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3	One console port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
7	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Ports

**Table 4-1761** Ports on the S5735-L24P4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> <li>● <b>FE SFP/eSFP optical modules (applicable in V200R021C00 and later versions)</b></li> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>10GE SFP+ optical modules (only used for stack connection, OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules (only used for stack connection)</b></li> <li>● <b>10GE-DWDM SFP+ optical modules (only used for stack connection)</b></li> <li>● <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables (only used for stack connection)</b></li> </ul>



Port	Connector Type	Description	Available Components
			<ul style="list-style-type: none"> <li>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	Console cable

## Indicators and Buttons

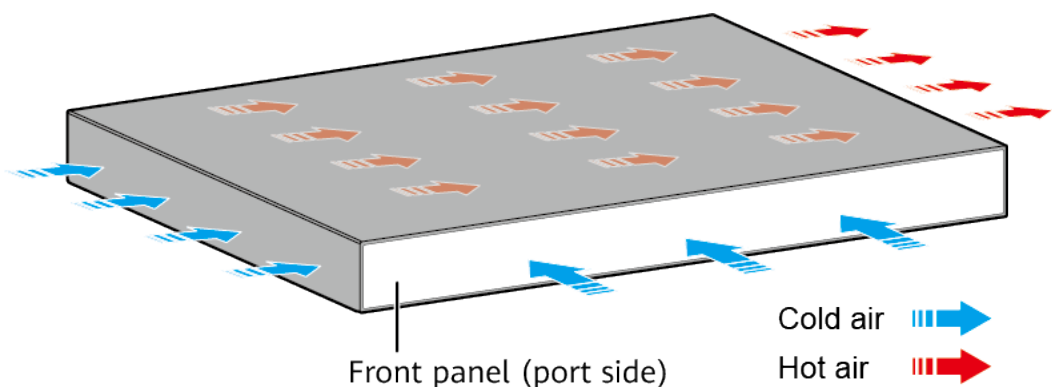
The S5735-L24P4S-A1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L24P4S-A1 does not have a USB indicator. For details, see the S5735-L24P4X-A1.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1762** Technical specifications of the S5735-L24P4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.94 kg (6.48 lb)
Weight with packaging [kg(lb)]	3.91 kg (8.62 lb)
Typical power consumption [W]	41.7 W
Typical heat dissipation [BTU/hour]	142.29 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Not providing the PoE function: 53.2 W</li> <li>100% PoE loads: 433.2 W (PoE: 380 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Not providing the PoE function: 181.52</li> <li>100% PoE loads: 1478.12</li> </ul>
Static power consumption [W]	29.6 W
MTBF [years]	55.72 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	50 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	38.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2

Item	Specification
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"><li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li><li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li><li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li></ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in

Item	Specification
Rated input voltage [V]	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum input current [A]	6 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

#### 4.32.10 S5735-L24P4S-A1 (98011321-001)

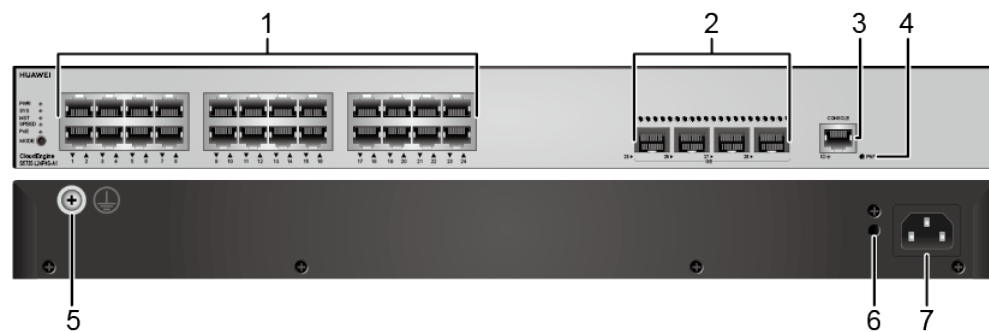
## Overview

**Table 4-1763** Basic information about the S5735-L24P4S-A1

Item	Details
Description	S5735-L24P4S-A1 (24*10/100/1000BASE-T ports, 4*GE SFP ports, PoE+, AC power)
Part Number	98011321-001
Model	S5735-L24P4S-A1
First supported version	V200R020C10
Remarks	Stacking is not supported. Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

**Figure 4-625** S5735-L24P4S-A1 appearance



1	Twenty-four 10/100/1000BASE-T PoE+ ports	2	Four 1000BASE-X ports
---	--	---	-----------------------

3	One console port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
7	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Ports

**Table 4-1764** Ports on the S5735-L24P4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> <li>• <b>FE SFP/eSFP optical modules (applicable in V200R021C00 and later versions)</b></li> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

## Indicators and Buttons

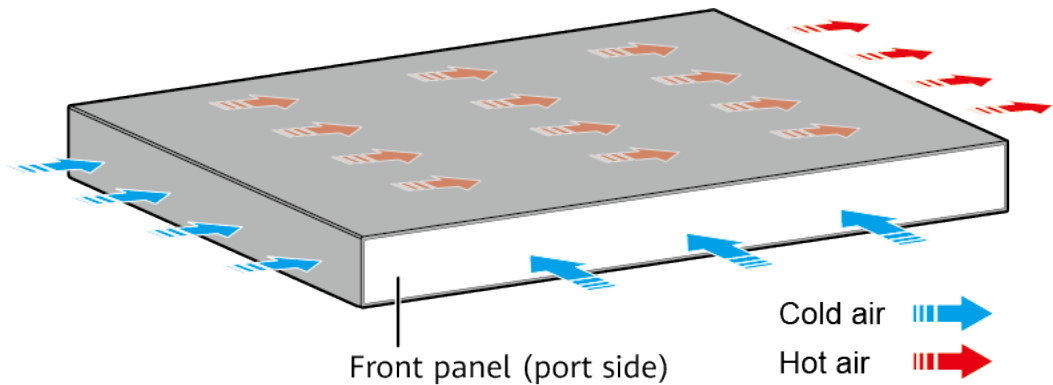
The S5735-L24P4S-A1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L24P4S-A1 does not have a USB indicator. For details, see the S5735-L24P4X-A1.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1765** Technical specifications of the S5735-L24P4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.94 kg (6.48 lb)
Weight with packaging [kg(lb)]	3.91 kg (8.62 lb)
Typical power consumption [W]	41.7 W
Typical heat dissipation [BTU/hour]	142.29 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Not providing the PoE function: 53.2 W</li> <li>100% PoE loads: 433.2 W (PoE: 380 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Not providing the PoE function: 181.52</li> <li>100% PoE loads: 1478.12</li> </ul>



Item	Specification
Static power consumption [W]	29.6 W
MTBF [years]	55.72 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	50 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	38.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>• High-Voltage DC input: 240 V DC</li> </ul>
Input voltage range [V]	<ul style="list-style-type: none"> <li>• AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>• High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>

Item	Specification
Maximum input current [A]	6 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.32.11 S5735-L24T4X-A1

### Overview

**Table 4-1766** Basic information about the S5735-L24T4X-A1

Item	Details
Description	S5735-L24T4X-A1 (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)
Part Number	98011302

Item	Details
Model	S5735-L24T4X-A1
First supported version	V200R020C10
Other part numbers	98011302-001: S5735-L24T4X-A1 (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power, Only for India and Pakistan)
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

Figure 4-626 S5735-L24T4X-A1 appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port

5	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <a href="#">ground cable</a>.</p>
7	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b></p> <p>The AC power cable locking strap is not delivered with the switch.</p>	8	<p>AC socket</p> <p><b>NOTE</b></p> <p>It is used with an <a href="#">AC power cable</a>.</p>

## Ports

**Table 4-1767** Ports on the S5735-L24T4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li><li>• <b>10GE-CWDM SFP+ optical modules</b></li><li>• <b>10GE-DWDM SFP+ optical modules</b></li><li>• <b>Industrial optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li><li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li><li>• <b>3 m and 10 m SFP+ AOC cables</b></li><li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-</b></li></ul>

Port	Connector Type	Description	Available Components
			<a href="#">configuration stacking</a> )
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>
USB port	USB 2.0 Type A	The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.  USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.	USB flash drive

## Indicators and Buttons

The S5735-L24T4X-A1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L24T4X-A1 does not have a PoE mode indicator. For details, see the S5735-L24P4X-A1.

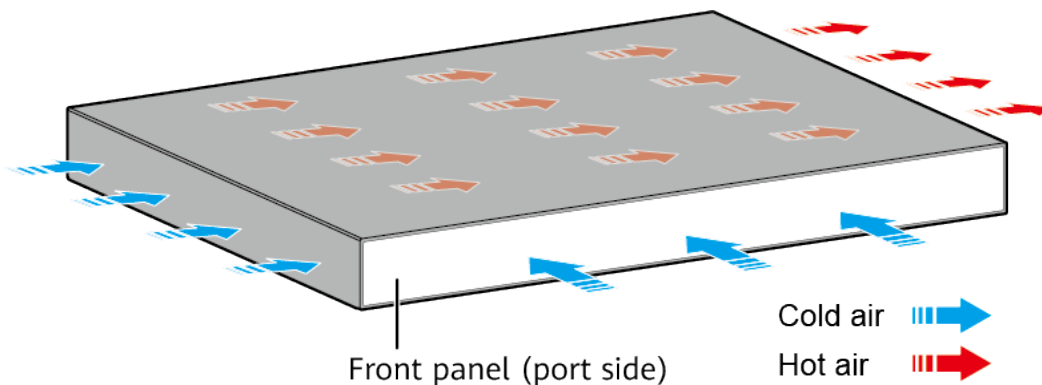
## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1768** Technical specifications of the S5735-L24T4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.54 kg (5.6 lb)
Weight with packaging [kg(lb)]	3.48 kg (7.67 lb)
Typical power consumption [W]	33.2 W
Typical heat dissipation [BTU/hour]	113.28 BTU/hour
Maximum power consumption [W]	45.6 W



Item	Specification
Maximum heat dissipation [BTU/hour]	155.59 BTU/hour
Static power consumption [W]	19.3 W
MTBF [years]	62.05 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	39 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) (0 m to 1800 m altitude, non-industrial optical modules) -5°C to +55°C (23°F to 131°F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F). The operating temperature ranges from -5°C to +45°C (23°F to 113°F) when optical modules with transmission distances greater than or equal to 70 km are used.
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)

Item	Specification
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>High-voltage DC input: 110 V DC to 250 V DC</li> </ul>
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC; 47 Hz to 63 Hz</li> <li>High-voltage DC input: 88 V DC to 300 V DC</li> </ul>
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	98011302: Common mode: $\pm 7$ kV 98011302-001: Common mode: $\pm 2$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.32.12 S5735-L24T4X-D1

### Overview

**Table 4-1769** Basic information about the S5735-L24T4X-D1

Item	Details
Description	S5735-L24T4X-D1 (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, DC power)
Part Number	98011304
Model	S5735-L24T4X-D1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

### Components

**Figure 4-627** S5735-L24T4X-D1 appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port

5	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <a href="#">ground cable</a>.</p>
7	<p>DC power terminal</p> <p><b>NOTE</b></p> <p>It is used with <a href="#">DC Power Cable</a>.</p>	-	-

## Ports

**Table 4-1770** Ports on the S5735-L24T4X-D1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li><li>• <b>10GE-CWDM SFP+ optical modules</b></li><li>• <b>10GE-DWDM SFP+ optical modules</b></li><li>• <b>Industrial optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li><li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li><li>• <b>3 m and 10 m SFP+ AOC cables</b></li><li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-</b></li></ul>

Port	Connector Type	Description	Available Components
			<b>configuration stacking)</b>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>
USB port	USB 2.0 Type A	The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.  USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.	USB flash drive

## Indicators and Buttons

The S5735-L24T4X-D1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L24T4X-D1 does not have a PoE mode indicator. For details, see the S5735-L24P4X-A1.

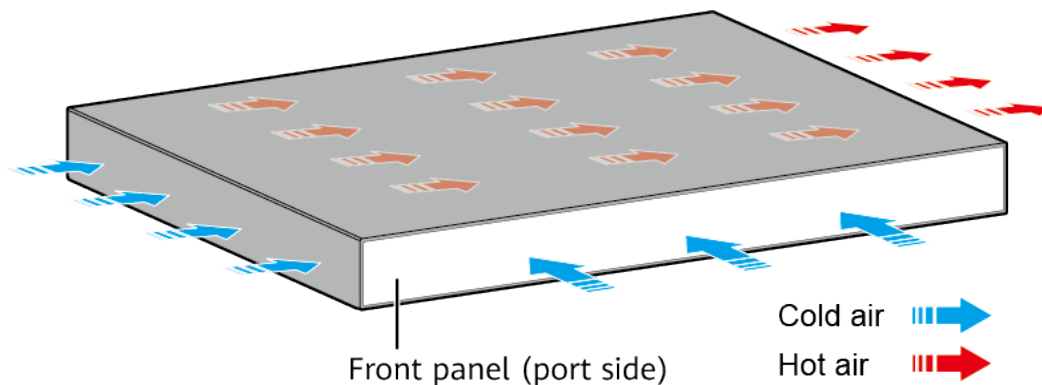
## Power Supply System

The switch has a built-in DC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1771** Technical specifications of the S5735-L24T4X-D1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)  Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.39 kg (5.27 lb)
Weight with packaging [kg(lb)]	3.28 kg (7.23 lb)
Typical power consumption [W]	34 W
Typical heat dissipation [BTU/hour]	116.01 BTU/hour
Maximum power consumption [W]	37.3 W

Item	Specification
Maximum heat dissipation [BTU/hour]	127.27 BTU/hour
Static power consumption [W]	21.9 W
MTBF [years]	62.05 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	39 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) (0 m to 1800 m altitude, non-industrial optical modules) -5°C to +55°C (23°F to 131°F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F). The operating temperature ranges from -5°C to +45°C (23°F to 113°F) when optical modules with transmission distances greater than or equal to 70 km are used.
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)



Item	Specification
Power supply mode	DC built-in
Rated input voltage [V]	DC input: -48 V DC to -60 V DC
Input voltage range [V]	DC input: -38.4 V DC to -72 V DC
Maximum input current [A]	6A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 2$ kV in differential mode, $\pm 4$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.32.13 S5735-L24P4X-A1

## Overview

**Table 4-1772** Basic information about the S5735-L24P4X-A1

Item	Details
Description	S5735-L24P4X-A1 (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power)
Part Number	98011318
Model	S5735-L24P4X-A1
First supported version	V200R020C10
Other part numbers	98011318-001: S5735-L24P4X-A1 (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power, Only for India and Pakistan)
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

**Figure 4-628** S5735-L24P4X-A1 appearance



1	Twenty-four 10/100/1000BASE-T PoE+ ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port

5	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>
7	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b></p> <p>The AC power cable locking strap is not delivered with the switch.</p>	8	<p>AC socket</p> <p><b>NOTE</b></p> <p>It is used with an <b>AC power cable</b>.</p>

## Ports

**Table 4-1773** Ports on the S5735-L24P4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	<p>A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.</p> <p>The port supports the PoE function.</p>	<b>Ethernet cable</b>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

Figure 4-629 Indicators on the switch

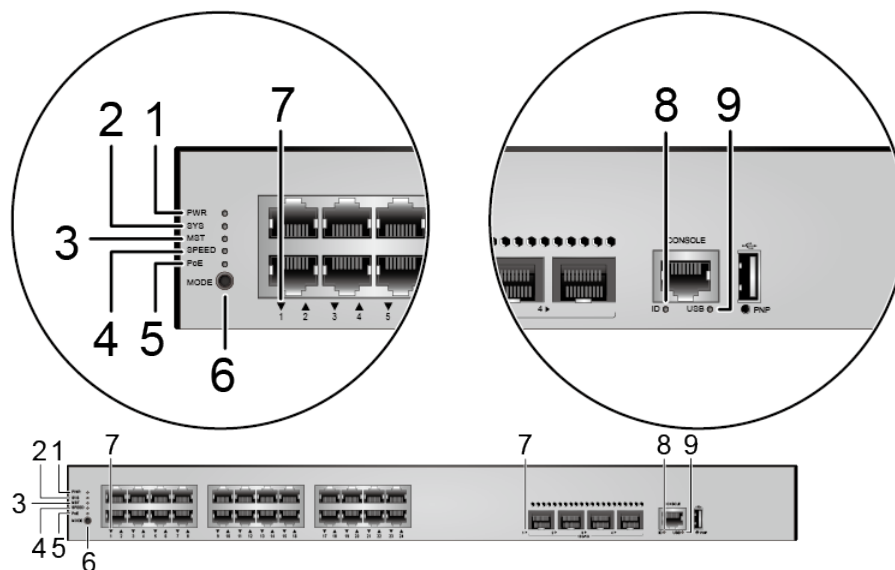


Table 4-1774 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.

No.	Indicator	Name	Color	Status	Description
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
5	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.

No.	Indicator	Name	Color	Status	Description
6	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p> <p><b>NOTE</b> Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> <li>If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows: <ul style="list-style-type: none"> <li>If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.</li> <li>If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.</li> </ul> </li> <li>If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.</li> </ul>



No.	Indicator	Name	Color	Status	Description
7	-	Service port indicator (one indicator for each port)	Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		<p>Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1775</a>.</p> <p><b>NOTE</b> If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.</p>
8	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
9	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Fast blinking	The system is reading data from a USB flash drive.
			Green	Slow blinking	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Fast blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1775** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.

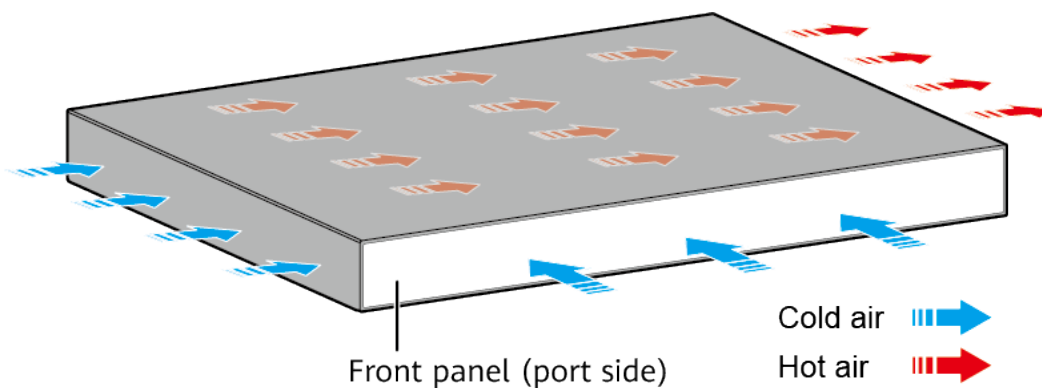
Display Mode	Color	Status	Description
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.

### Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

### Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1776** Technical specifications of the S5735-L24P4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)  Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.96 kg (6.53 lb)
Weight with packaging [kg(lb)]	3.93 kg (8.66 lb)
Typical power consumption [W]	42.4 W
Typical heat dissipation [BTU/hour]	144.67 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Not providing the PoE function: 53.8 W</li> <li>100% PoE loads: 433.8 W (PoE: 380 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Not providing the PoE function: 183.57</li> <li>100% PoE loads: 1480.17</li> </ul>
Static power consumption [W]	30.2 W
MTBF [years]	52.74 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	50 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	38.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2

Item	Specification
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in

Item	Specification
Rated input voltage [V]	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum input current [A]	6 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	98011318: Common mode: $\pm 7$ kV 98011318-001: Common mode: $\pm 2$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.32.14 S5735-L32ST4X-A1

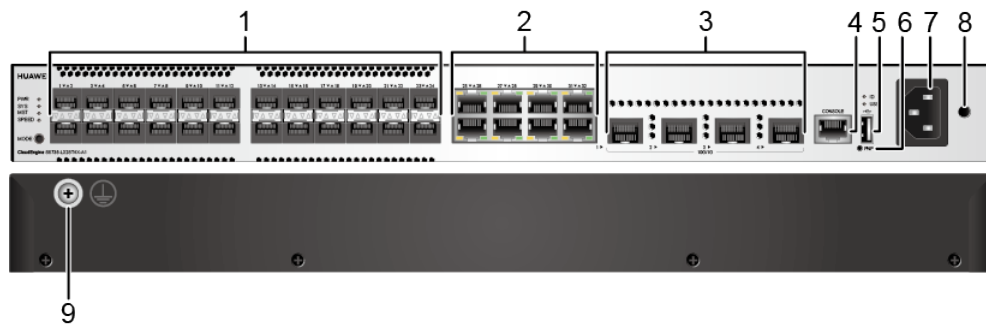
## Overview

**Table 4-1777** Basic information about the S5735-L32ST4X-A1

Item	Details
Description	S5735-L32ST4X-A1 (24*GE SFP ports, 8*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power, front access)
Part Number	98011396
Model	S5735-L32ST4X-A1
First supported version	V200R020C10

## Components

**Figure 4-630** S5735-L32ST4X-A1 appearance



1	Twenty-four 100/1000BASE-X ports	2	Eight 10/100/1000BASE-T ports
3	Four 10GE SFP+ ports	4	One console port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	-	-

## Ports

**Table 4-1778** Ports on the S5735-L32ST4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s.	<ul style="list-style-type: none"> <li>• <b>FE SFP/eSFP optical modules</b></li> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> </ul>

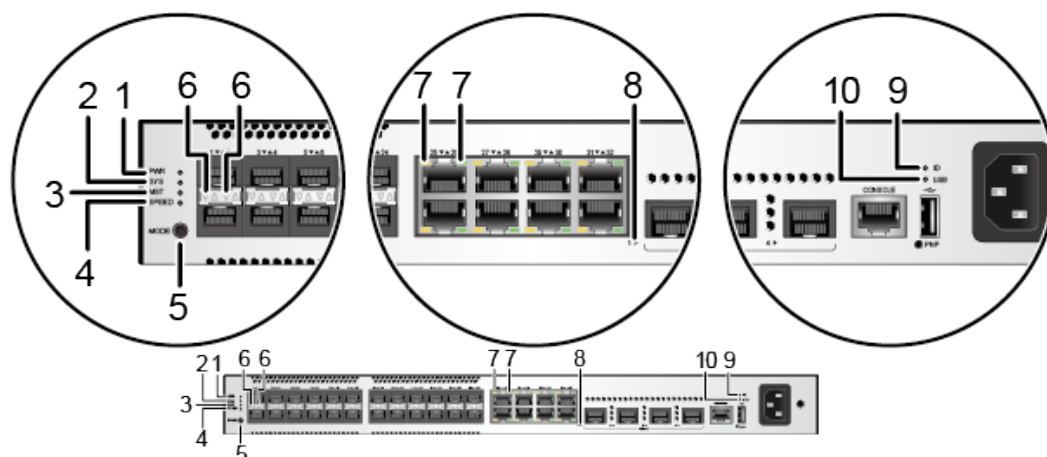


Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules</b></li> <li>● <b>10GE-DWDM SFP+ optical modules</b></li> <li>● <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables</b></li> <li>● <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

Figure 4-631 Indicators on the switch



**Table 4-1779** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.

No.	Indicator	Name	Color	Status	Description
			Green	Blinking	<ul style="list-style-type: none"><li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li><li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li></ul>
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.

No.	Indicator	Name	Color	Status	Description
5	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a third time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED indicator is off.</p> <p><b>NOTE</b> Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> <li>If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows: <ul style="list-style-type: none"> <li>If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.</li> <li>If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.</li> </ul> </li> <li>If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.</li> </ul>

No.	Indicator	Name	Color	Status	Description
6	-	Optical service port indicator (two indicators for each port)	Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1780</a> and <a href="#">Table 4-1781</a> . <b>NOTE</b> If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.
7	-	Electrical service port indicator (two indicators for each port)	Each electrical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green).		
8	-	Optical service port indicator (one indicator for each port)	Each optical port has one single-color indicator. Arrowheads show the positions of ports.		
9	ID	ID indicator	-	Off	The ID indicator is not used (default state).

No.	Indicator	Name	Color	Status	Description
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
10	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Fast blinking	The system is reading data from a USB flash drive.
			Green	Slow blinking	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Fast blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1780** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed mode	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s.

**Table 4-1781** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode (LINK indicator)	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
Default mode (ACT indicator)	-	Off	The port is not connected or has been shut down, or no data is transmitted or received.
	Yellow	Blinking	The port is sending or receiving data.
MST stack mode (LINK and ACT indicators)	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on simultaneously	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green and yellow	Blinking simultaneously	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode (LINK indicator)	-	Off	The port is not connected or has been shut down.



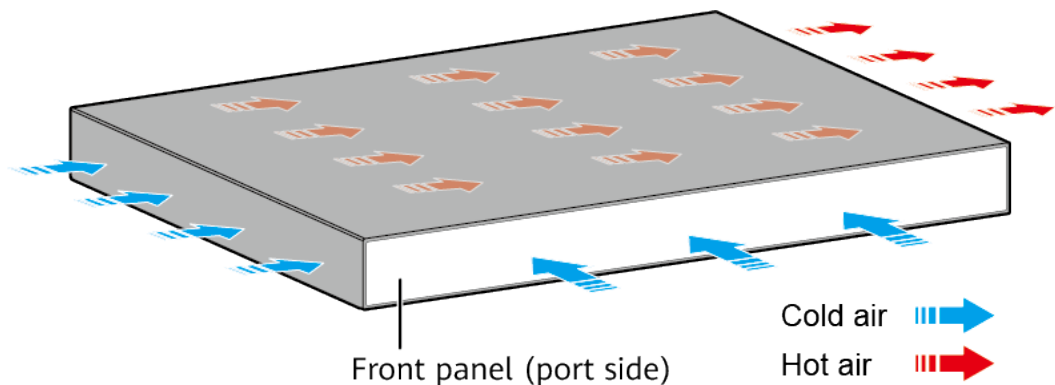
Display Mode	Color	Status	Description
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1782** Technical specifications of the S5735-L32ST4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.88 kg (6.35 lb)
Weight with packaging [kg(lb)]	4.03 kg (8.89 lb)
Typical power consumption [W]	53.2 W
Typical heat dissipation [BTU/hour]	181.52 BTU/hour
Maximum power consumption [W]	66.8 W
Maximum heat dissipation [BTU/hour]	227.93 BTU/hour
Static power consumption [W]	39.3 W
MTBF [years]	58.44 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	46.8 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	35 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Specification
Short-term operating temperature [°C(°F)]	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 110 V DC to 250 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"><li>AC input: 90 V AC to 264 V AC; 47 Hz to 63 Hz</li><li>High-voltage DC input: 88 V DC to 300 V DC</li></ul>
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.32.15 S5735-L32ST4X-D1

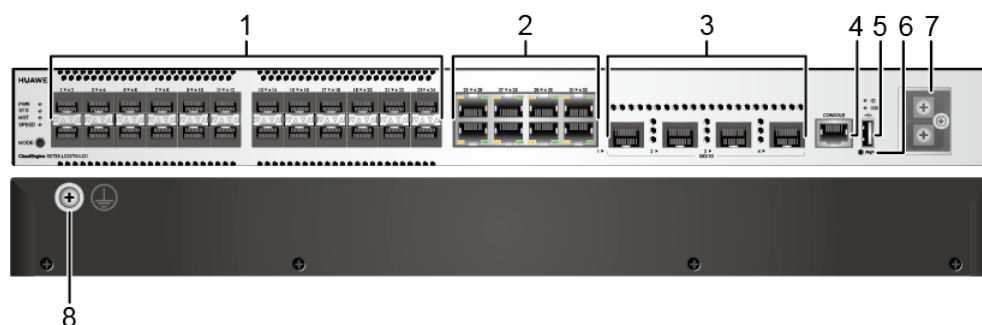
## Overview

**Table 4-1783** Basic information about the S5735-L32ST4X-D1

Item	Details
Description	S5735-L32ST4X-D1 (24*GE SFP ports, 8*10/100/1000BASE-T ports, 4*10GE SFP+ ports, DC power, front access)
Part Number	98011399
Model	S5735-L32ST4X-D1
First supported version	V200R020C10

## Components

**Figure 4-632** S5735-L32ST4X-D1 appearance



1	Twenty-four 100/1000BASE-X ports	2	Eight 10/100/1000BASE-T ports
3	Four 10GE SFP+ ports	4	One console port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	DC power terminal <b>NOTE</b> It is used with <a href="#">DC Power Cable</a> .	8	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .

## Ports

**Table 4-1784** Ports on the S5735-L32ST4X-D1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s.	<ul style="list-style-type: none"> <li>• <b>FE SFP/eSFP optical modules</b></li> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> </ul>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li><li>• <b>10GE-CWDM SFP+ optical modules</b></li><li>• <b>10GE-DWDM SFP+ optical modules</b></li><li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li><li>• <b>3 m and 10 m SFP+ AOC cables</b></li><li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li></ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

The S5735-L32ST4X-D1 has the same types of indicators as the S5735-L32ST4X-A1. For details, see the S5735-L32ST4X-A1.

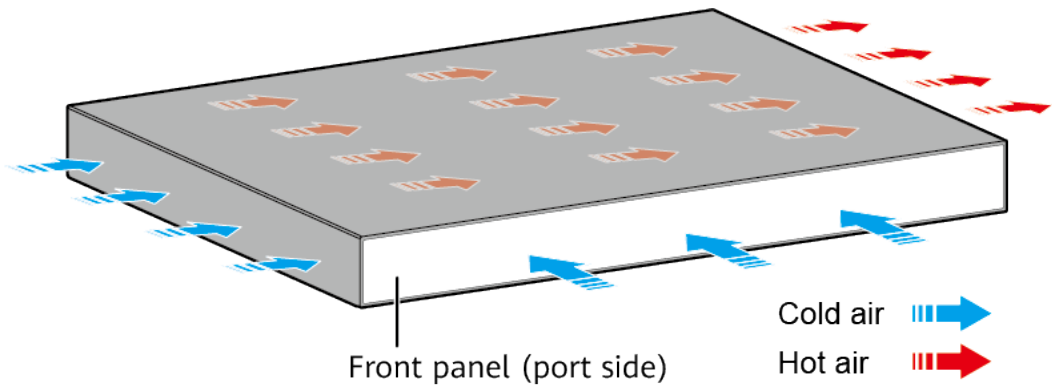
## Power Supply System

The switch has a built-in DC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.





**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1785** Technical specifications of the S5735-L32ST4X-D1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.75 kg (6.06 lb)
Weight with packaging [kg(lb)]	3.85 kg (8.49 lb)
Typical power consumption [W]	60.7 W
Typical heat dissipation [BTU/hour]	207.12 BTU/hour
Maximum power consumption [W]	61.9 W
Maximum heat dissipation [BTU/hour]	211.21 BTU/hour
Static power consumption [W]	37.8 W
MTBF [years]	58.44 years
MTTR [hours]	2 hours
Availability	> 0.99999

Item	Specification
Noise at normal temperature (acoustic power) [dB(A)]	46.8 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	35 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)

Item	Specification
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	DC built-in
Rated input voltage [V]	-48 V DC to -60 V DC
Input voltage range [V]	-38.4 V DC to -72 V DC
Maximum input current [A]	6 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 2$ kV in differential mode, $\pm 4$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.32.16 S5735-L48T4S-A1

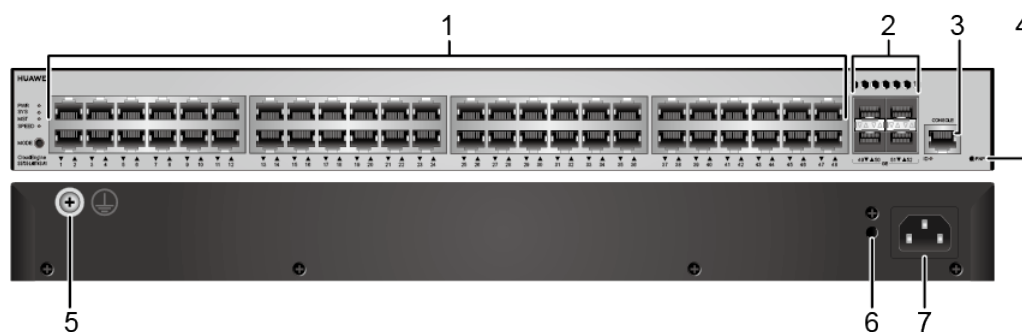
## Overview

**Table 4-1786** Basic information about the S5735-L48T4S-A1

Item	Details
Description	S5735-L48T4S-A1 (48*10/100/1000BASE-T ports, 4*GE SFP ports, AC power)
Part Number	98011334
Model	S5735-L48T4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

**Figure 4-633** S5735-L48T4S-A1 appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports
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3	One console port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
7	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Ports

**Table 4-1787** Ports on the S5735-L48T4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"><li>• <b>FE SFP/eSFP optical modules (applicable in V200R021C00 and later versions)</b></li><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>10GE SFP+ optical modules (only used for stack connection, OSXD22N00 not supported)</b></li><li>• <b>10GE-CWDM SFP+ optical modules (only used for stack connection)</b></li><li>• <b>10GE-DWDM SFP+ optical modules (only used for stack connection)</b></li><li>• <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection)</b></li><li>• <b>3 m and 10 m SFP+ AOC cables (only used for stack connection)</b></li></ul>

Port	Connector Type	Description	Available Components
			<ul style="list-style-type: none"> <li>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	Console cable

## Indicators and Buttons

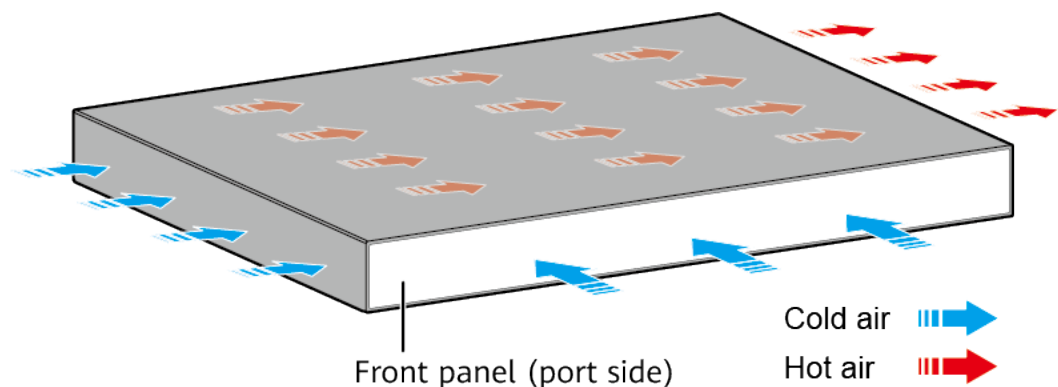
The S5735-L48T4S-A1 has similar indicators to those on the S5735-L48P4X-A1 except that the S5735-L48T4S-A1 does not have USB and PoE mode indicators. For details, see the S5735-L48P4X-A1.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1788** Technical specifications of the S5735-L48T4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.76 kg (6.09 lb)
Weight with packaging [kg(lb)]	3.74 kg (8.25 lb)
Typical power consumption [W]	43.3 W
Typical heat dissipation [BTU/hour]	147.74 BTU/hour
Maximum power consumption [W]	50.4 W
Maximum heat dissipation [BTU/hour]	171.97 BTU/hour
Static power consumption [W]	20.3 W
MTBF [years]	56.7 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	48 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	36.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)



Item	Specification
Short-term operating temperature [°C(°F)]	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The operating temperature ranges from -5°C to +45°C (23°F to 113°F) when optical modules with transmission distances greater than or equal to 70 km are used.</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in

Item	Specification
Rated input voltage [V]	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>High-voltage DC input: 110 V DC to 250 V DC</li> </ul>
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC; 47 Hz to 63 Hz</li> <li>High-voltage DC input: 88 V DC to 300 V DC</li> </ul>
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.32.17 S5735-L48P4S-A1

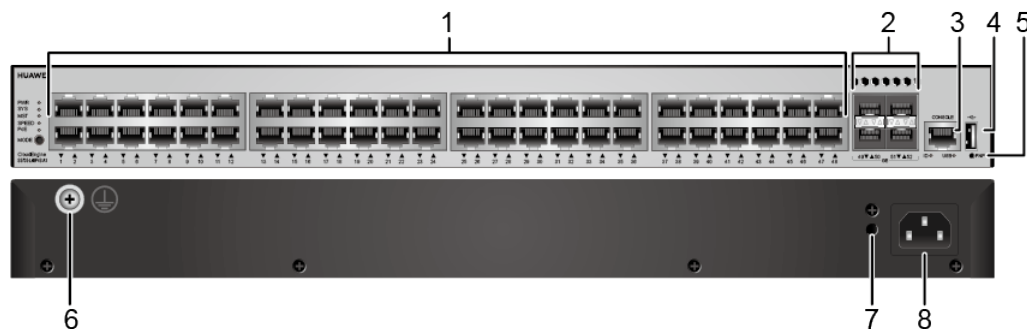
## Overview

**Table 4-1789** Basic information about the S5735-L48P4S-A1

Item	Details
Description	S5735-L48P4S-A1 (48*10/100/1000BASE-T ports, 4*GE SFP ports, PoE+, AC power)
Part Number	98011345
Model	S5735-L48P4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

**Figure 4-634** S5735-L48P4S-A1 appearance



1	Forty-eight 10/100/1000BASE-T PoE + ports	2	Four 1000BASE-X ports
3	One console port	4	One USB port

5	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>
7	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b></p> <p>The AC power cable locking strap is not delivered with the switch.</p>	8	<p>AC socket</p> <p><b>NOTE</b></p> <p>It is used with an <b>AC power cable</b>.</p>

## Ports

**Table 4-1790** Ports on the S5735-L48P4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	<p>A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.</p> <p>The port supports the PoE function.</p>	<b>Ethernet cable</b>

Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> <li>● <b>FE SFP/eSFP optical modules (applicable in V200R021C00 and later versions)</b></li> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>10GE SFP+ optical modules (only used for stack connection, OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules (only used for stack connection)</b></li> <li>● <b>10GE-DWDM SFP+ optical modules (only used for stack connection)</b></li> <li>● <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables (only used for stack connection)</b></li> </ul>

Port	Connector Type	Description	Available Components
			<ul style="list-style-type: none"><li>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</li></ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	Console cable
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

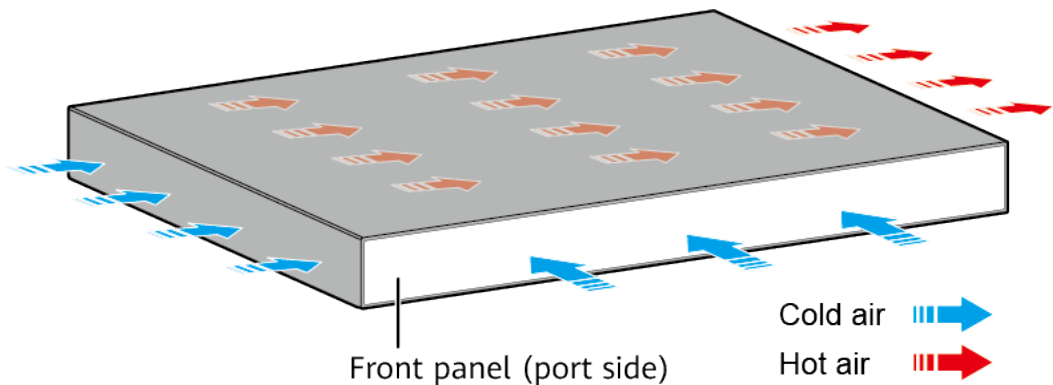
The S5735-L48P4S-A1 has the same types of indicators as the S5735-L48P4X-A1. For details, see the S5735-L48P4X-A1.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1791** Technical specifications of the S5735-L48P4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.23 kg (7.12 lb)
Weight with packaging [kg(lb)]	4.28 kg (9.44 lb)
Typical power consumption [W]	58.7 W

Item	Specification
Typical heat dissipation [BTU/hour]	200.29 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Not providing the PoE function: 76.1 W</li> <li>100% PoE loads: 456.1 W (PoE: 380 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Not providing the PoE function: 259.66</li> <li>100% PoE loads: 1556.26</li> </ul>
Static power consumption [W]	35.3 W
MTBF [years]	44.9 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	50 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	38.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)



Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>• High-Voltage DC input: 240 V DC</li> </ul>
Input voltage range [V]	<ul style="list-style-type: none"> <li>• AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>• High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>

Item	Specification
Maximum input current [A]	6 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.32.18 S5735-L48T4X-A1

### Overview

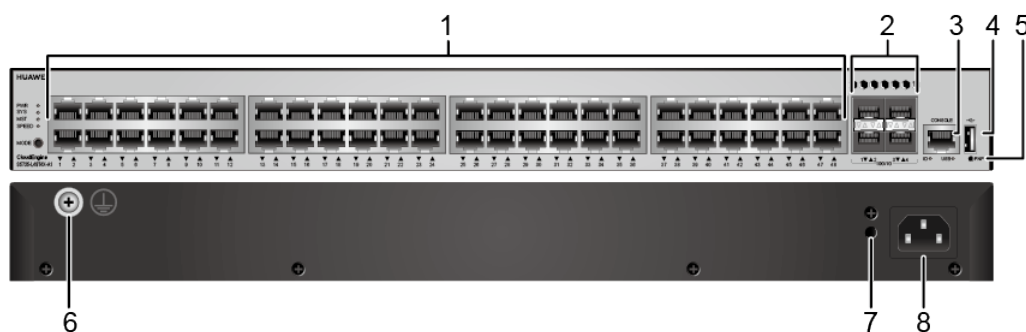
**Table 4-1792** Basic information about the S5735-L48T4X-A1

Item	Details
Description	S5735-L48T4X-A1 (48*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)
Part Number	98011332

Item	Details
Model	S5735-L48T4X-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

Figure 4-635 S5735-L48T4X-A1 appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port
5	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .

7	Jack for AC power cable locking strap  <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	8	AC socket  <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .
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## Ports

**Table 4-1793** Ports on the S5735-L48T4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

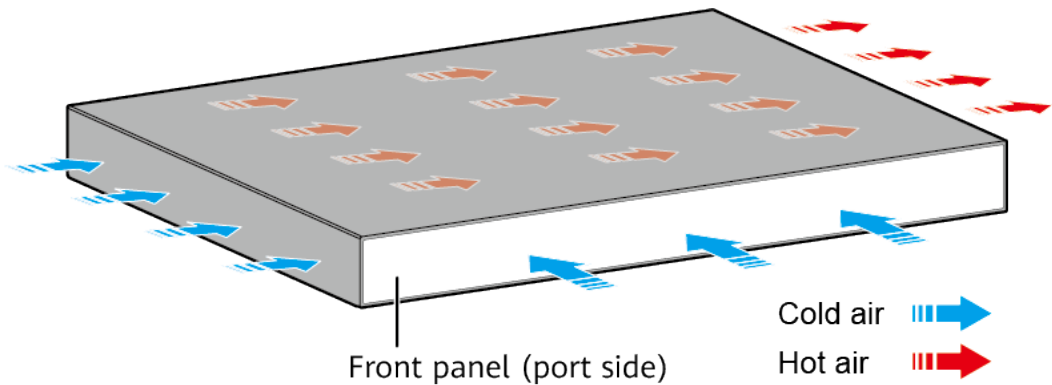
The S5735-L48T4X-A1 has similar indicators to those on the S5735-L48P4X-A1 except that the S5735-L48T4X-A1 does not have a PoE mode indicator. For details, see the S5735-L48P4X-A1.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1794** Technical specifications of the S5735-L48T4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.81 kg (6.2 lb)
Weight with packaging [kg(lb)]	3.79 kg (8.36 lb)
Typical power consumption [W]	43.2 W
Typical heat dissipation [BTU/hour]	147.4 BTU/hour
Maximum power consumption [W]	51.9 W
Maximum heat dissipation [BTU/hour]	177.09 BTU/hour
Static power consumption [W]	20.1 W
MTBF [years]	53.67 years
MTTR [hours]	2 hours
Availability	> 0.99999

Item	Specification
Noise at normal temperature (acoustic power) [dB(A)]	48 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	36.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)



Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The operating temperature ranges from -5°C to +45°C (23°F to 113°F) when optical modules with transmission distances greater than or equal to 70 km are used.</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 110 V DC to 250 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC; 47 Hz to 63 Hz</li> <li>High-voltage DC input: 88 V DC to 300 V DC</li> </ul>
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.32.19 S5735-L48P4X-A1

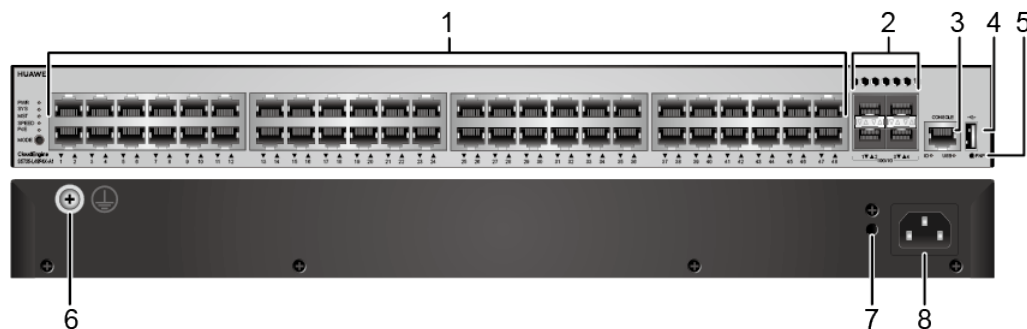
## Overview

**Table 4-1795** Basic information about the S5735-L48P4X-A1

Item	Details
Description	S5735-L48P4X-A1 (48*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power)
Part Number	98011343
Model	S5735-L48P4X-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

**Figure 4-636** S5735-L48P4X-A1 appearance



1	Forty-eight 10/100/1000BASE-T PoE + ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port

5	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>
7	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b></p> <p>The AC power cable locking strap is not delivered with the switch.</p>	8	<p>AC socket</p> <p><b>NOTE</b></p> <p>It is used with an <b>AC power cable</b>.</p>

## Ports

**Table 4-1796** Ports on the S5735-L48P4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	<p>A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.</p> <p>The port supports the PoE function.</p>	<b>Ethernet cable</b>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

Figure 4-637 Indicators on the switch

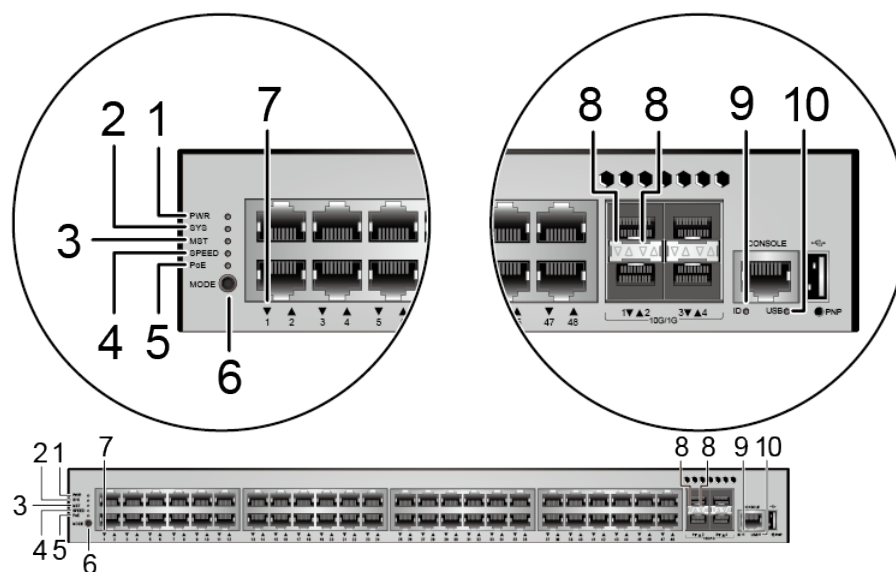


Table 4-1797 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.

No.	Indicator	Name	Color	Status	Description
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
5	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.



No.	Indicator	Name	Color	Status	Description
6	MODE	Mode switch button	-	-	<ul style="list-style-type: none"><li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li><li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li><li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li><li>When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li></ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p> <p><b>NOTE</b></p> <p>Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"><li>If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:<ul style="list-style-type: none"><li>If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.</li><li>If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.</li></ul></li><li>If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.</li></ul>

No.	Indicator	Name	Color	Status	Description
7	-	Electrical service port indicator (one indicator for each port)	Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		<p>Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1798</a> and <a href="#">Table 4-1799</a>.</p> <p><b>NOTE</b> If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.</p>
8	-	Optical service port indicator (two indicators for each port)	<p>Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green).</p> <p>Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.</p>		
9	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.

No.	Indicator	Name	Color	Status	Description
10	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Fast blinking	The system is reading data from a USB flash drive.
			Green	Slow blinking	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Fast blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1798** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.

**Table 4-1799** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode (LINK indicator)	-	Off	The port is not connected or has been shut down.

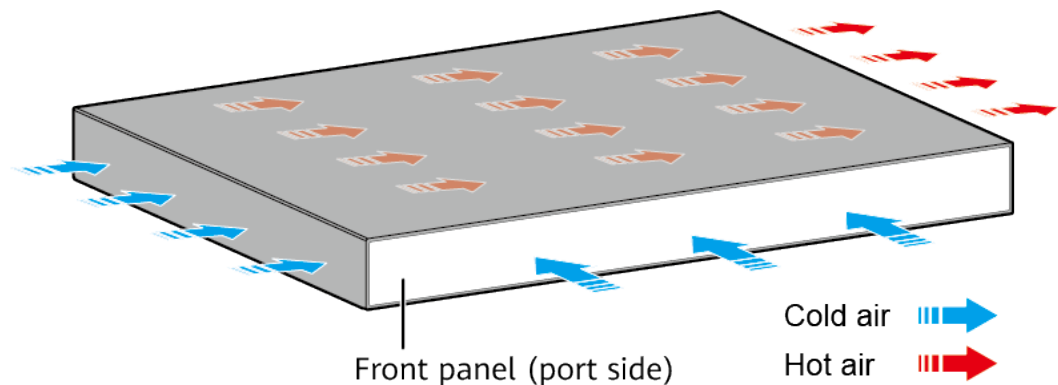
Display Mode	Color	Status	Description
	Green	Steady on	A link has been established on the port.
Default mode (ACT indicator)	-	Off	The port is not connected or has been shut down, or no data is transmitted or received.
	Yellow	Blinking	The port is sending or receiving data.
Speed mode (LINK indicator)	-	Off	The port is not connected or has been shut down.
	Green	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1800** Technical specifications of the S5735-L48P4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.23 kg (7.12 lb)
Weight with packaging [kg(lb)]	4.28 kg (9.44 lb)
Typical power consumption [W]	58.7 W
Typical heat dissipation [BTU/hour]	200.29 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Not providing the PoE function: 76.1 W</li> <li>100% PoE loads: 456.1 W (PoE: 380 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Not providing the PoE function: 259.66</li> <li>100% PoE loads: 1556.26</li> </ul>
Static power consumption [W]	35.3 W
MTBF [years]	44.03 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	50 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	38.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2

Item	Specification
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in

Item	Specification
Rated input voltage [V]	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum input current [A]	6 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.32.20 S5735-L8T4S-QA1



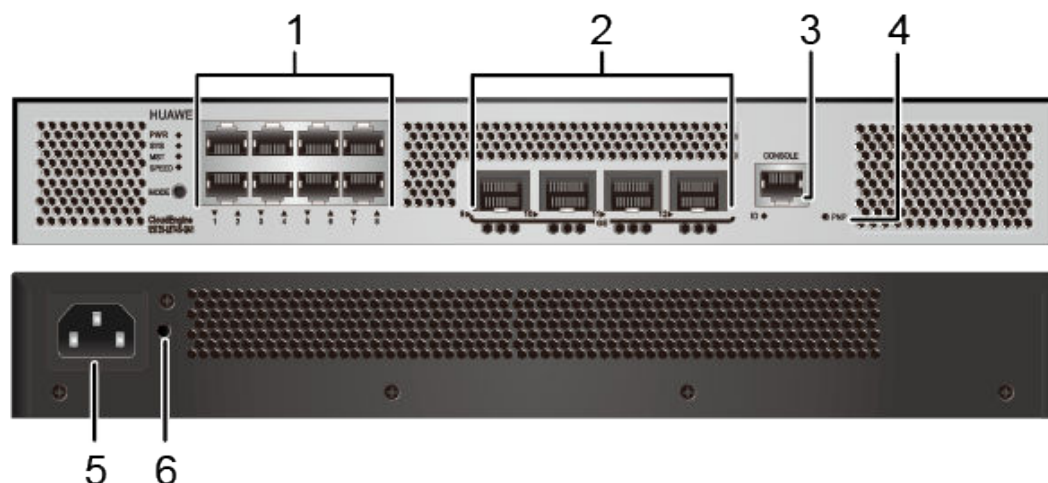
## Overview

**Table 4-1801** Basic information about the S5735-L8T4S-QA1

Item	Details
Description	S5735-L8T4S-QA1 (8*10/100/1000BASE-T ports, 4*GE SFP ports, AC power, Fanless)
Part Number	98011551
Model	S5735-L8T4S-QA1
First supported version	V200R021C00

## Components

**Figure 4-638** S5735-L8T4S-QA1 appearance



1	Eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports
3	One console port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

5	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	6	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
-	Ground screw <b>NOTE</b> The ground screw is on the left side of the chassis.	-	-

## Ports

**Table 4-1802** Ports on the S5735-L8T4S-QA1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> <li>● <b>FE SFP/eSFP optical modules</b></li> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>Industrial optical modules</b></li> <li>● <b>10GE SFP+ optical modules (only used for stack connection, a maximum transmission distance of 10 km, OSXD22N00 not supported)</b></li> <li>● <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables (only used for stack connection)</b></li> <li>● <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>

Port	Connector Type	Description	Available Components
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>

## Indicators and Buttons

The S5735-L8T4S-QA1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L8T4S-QA1 does not have USB and PoE mode indicators. For details, see the S5735-L24P4X-A1.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1803** Technical specifications of the S5735-L8T4S-QA1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 320.0 mm x 210.0 mm (1.72 in. x 12.6 in. x 8.27 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 320.0 mm x 217.0 mm (1.72 in. x 12.6 in. x 8.54 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 465.0 mm x 380.0 mm (3.54 in. x 18.31 in. x 14.96 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.30 kg (5.07 lb)
Weight with packaging [kg(lb)]	3.10 kg (6.83 lb)
Typical power consumption [W]	20.5 W
Typical heat dissipation [BTU/hour]	69.95 BTU/hour

Item	Specification
Maximum power consumption [W]	22 W
Maximum heat dissipation [BTU/hour]	75.07 BTU/hour
Static power consumption [W]	13.0 W
MTBF [years]	71.82 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans), < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans), < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.51 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F).</p> <p>When the following optical modules are used, the device can operate in the temperature range of -5°C to +40°C (23°F to 104°F):</p> <ul style="list-style-type: none"> <li>• 10GE non-industrial optical module with a transmission distance of 10 km</li> <li>• Non-industrial FE/GE optical module with a transmission distance of 40 km or 80 km</li> </ul>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)

Item	Specification
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	0.8 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.32.21 S5735-L8P4S-QA1

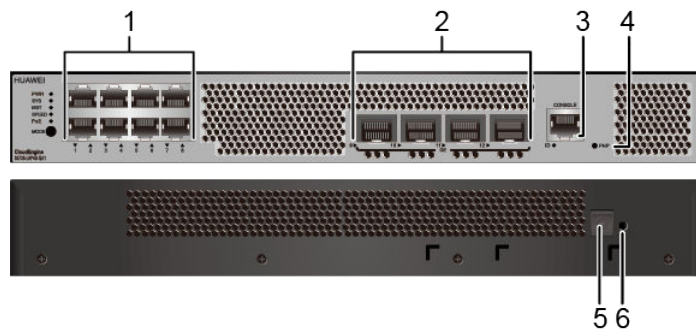
## Overview

**Table 4-1804** Basic information about the S5735-L8P4S-QA1

Item	Details
Description	S5735-L8P4S-QA1 (8*10/100/1000BASE-T ports, 4*GE SFP ports, PoE+, AC power, Fanless)
Part Number	98011565
Model	S5735-L8P4S-QA1
First supported version	V200R021C00

## Components

**Figure 4-639** S5735-L8P4S-QA1 appearance



1	Eight 10/100/1000BASE-T PoE+ ports	2	Four 1000BASE-X ports
3	One console port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Power adapter socket <b>NOTE</b> It is used with the power adapter delivered with the switch.	6	Jack for power adapter cable locking strap <b>NOTE</b> The power adapter cable locking strap is delivered with the switch.

-	Ground screw  <b>NOTE</b> The ground screw is on the left side of the chassis.	-	-
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## Ports

**Table 4-1805** Ports on the S5735-L8P4S-QA1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.  The port supports the PoE function.	<a href="#">Ethernet cable</a>



Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"><li>• <b>FE SFP/eSFP optical modules</b></li><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>Industrial optical modules</b></li><li>• <b>10GE SFP+ optical modules (only used for stack connection, a maximum transmission distance of 10 km, OSXD22N00 not supported)</b></li><li>• <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection)</b></li><li>• <b>3 m and 10 m SFP+ AOC cables (only used for stack connection)</b></li><li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li></ul>

Port	Connector Type	Description	Available Components
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>

## Indicators and Buttons

The S5735-L8P4S-QA1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L8P4S-QA1 does not have a USB indicator. For details, see the S5735-L24P4X-A1.

## Power Supply System

The switch uses an external power adapter to power the device and PDs. The adapter can provide 114 W PoE power, which ensures full PoE power on 7 ports in compliance with 802.3af or on 3 ports in compliance with 802.3at.

[Figure 4-640](#) shows the power adapter delivered with the switch. The power adapter must be used with the C7 connector power cable delivered with the switch.

**Figure 4-640** Appearance of a power adapter



## Heat Dissipation System

The switch has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1806** Technical specifications of the S5735-L8P4S-QA1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 320.0 mm x 210.0 mm (1.72 in. x 12.6 in. x 8.27 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 320.0 mm x 227.0 mm (1.72 in. x 12.6 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 465.0 mm x 380.0 mm (3.54 in. x 18.31 in. x 14.96 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.41 kg (5.31 lb)
Weight with packaging [kg(lb)]	4.06 kg (8.95 lb)
Typical power consumption [W]	26.3 W
Typical heat dissipation [BTU/hour]	89.74 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 28 W</li> <li>Full PoE load: 159 W (PoE: 114 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 95.54</li> <li>Full PoE load: 543.89</li> </ul>
Static power consumption [W]	19.5 W
MTBF [years]	66.56 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans), < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans), < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Not supported

Item	Specification
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.51 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F).</p> <p>When the following optical modules are used, the device can operate in the temperature range of -5°C to +40°C (23°F to 104°F):</p> <ul style="list-style-type: none"> <li>• 10GE non-industrial optical module with a transmission distance of 10 km</li> <li>• Non-industrial FE/GE optical module with a transmission distance of 40 km or 80 km</li> </ul>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Power adapter
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC; 47 Hz to 63 Hz
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported

Item	Specification
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 4$ kV in differential mode and $\pm 4$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.32.22 S5735-L24T4S-QA1

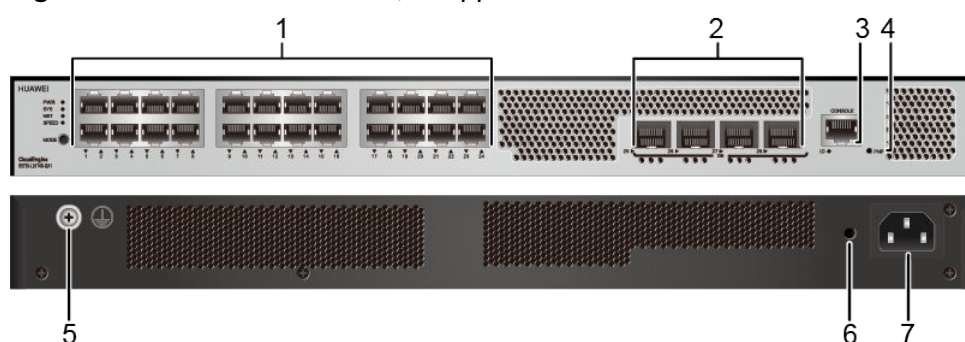
### Overview

**Table 4-1807** Basic information about the S5735-L24T4S-QA1

Item	Details
Description	S5735-L24T4S-QA1 (24*10/100/1000BASE-T ports, 4*GE SFP ports, AC power, Fanless)
Part Number	98011585
Model	S5735-L24T4S-QA1
First supported version	V200R021C00

### Components

**Figure 4-641** S5735-L24T4S-QA1 appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports
3	One console port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
7	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Ports

**Table 4-1808** Ports on the S5735-L24T4S-QA1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> <li>● <b>FE SFP/eSFP optical modules</b></li> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>Industrial optical modules</b></li> <li>● <b>10GE SFP+ optical modules (only used for stack connection, a maximum transmission distance of 10 km, OSXD22N00 not supported)</b></li> <li>● <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables (only used for stack connection)</b></li> <li>● <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>

Port	Connector Type	Description	Available Components
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>

## Indicators and Buttons

The S5735-L24T4S-QA1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L24T4S-QA1 does not have USB and PoE mode indicators. For details, see the S5735-L24P4X-A1.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1809** Technical specifications of the S5735-L24T4S-QA1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.69 kg (8.14 lb)
Weight with packaging [kg(lb)]	4.45 kg (9.81 lb)
Typical power consumption [W]	29.8 W
Typical heat dissipation [BTU/hour]	101.68 BTU/hour



Item	Specification
Maximum power consumption [W]	33 W
Maximum heat dissipation [BTU/hour]	112.60 BTU/hour
Static power consumption [W]	17.4 W
MTBF [years]	66.16 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans), < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans), < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.51 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F).</p> <p>When the following optical modules are used, the device can operate in the temperature range of -5°C to +40°C (23°F to 104°F):</p> <ul style="list-style-type: none"> <li>• 10GE non-industrial optical module with a transmission distance of 10 km</li> <li>• Non-industrial FE/GE optical module with a transmission distance of 40 km or 80 km</li> </ul>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)

Item	Specification
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.32.23 S5735-L24T4X-QA1

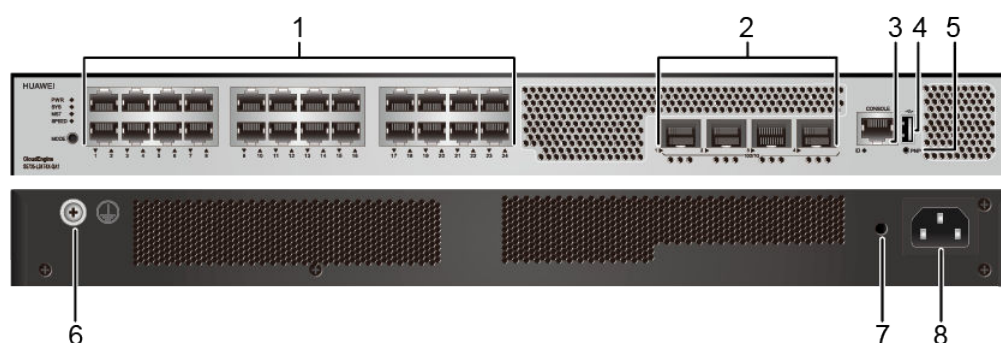
## Overview

**Table 4-1810** Basic information about the S5735-L24T4X-QA1

Item	Details
Description	S5735-L24T4X-QA1 (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power, Fanless)
Part Number	98011583
Model	S5735-L24T4X-QA1
First supported version	V200R021C00

## Components

**Figure 4-642** S5735-L24T4X-QA1 appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port
5	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .

7	Jack for AC power cable locking strap  <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	8	AC socket  <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .
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## Ports

**Table 4-1811** Ports on the S5735-L24T4X-QA1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>10GE SFP+ optical modules (OSXD22N00 not supported, the maximum transmission distance cannot exceed 10 km)</b></li> <li>● <b>Industrial optical modules</b></li> <li>● <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables</b></li> <li>● <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

The S5735-L24T4X-QA1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L24T4X-QA1 does not have a PoE mode indicator. For details, see the S5735-L24P4X-A1.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1812** Technical specifications of the S5735-L24T4X-QA1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.69 kg (8.14 lb)
Weight with packaging [kg(lb)]	4.45 kg (9.81 lb)
Typical power consumption [W]	30.8 W
Typical heat dissipation [BTU/hour]	105.09 BTU/hour
Maximum power consumption [W]	34 W
Maximum heat dissipation [BTU/hour]	116.01 BTU/hour
Static power consumption [W]	17.4 W
MTBF [years]	62.05 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans), < 30
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans), < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0 to 1800 m (0 to 5905.51 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F).</p> <p>When the following optical modules are used, the device can operate in the temperature range of -5°C to +40°C (23°F to 104°F):</p> <ul style="list-style-type: none"><li>• 10GE non-industrial optical module with a transmission distance of 10 km</li><li>• Non-industrial FE/GE optical module with a transmission distance of 40 km or 80 km</li></ul>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ±7 kV



Item	Specification
Power supply surge protection [kV]	±6 kV in differential mode, ±6 kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.33 S5735S-L1

### 4.33.1 S5735S-L8T4S-A1

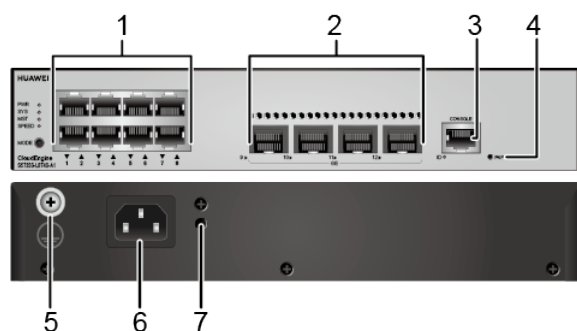
#### Overview

**Table 4-1813** Basic information about the S5735S-L8T4S-A1

Item	Details
Description	S5735S-L8T4S-A1 (8*10/100/1000BASE-T ports, 4*GE SFP ports, AC power)
Part Number	98011285
Model	S5735S-L8T4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

Figure 4-643 S5735S-L8T4S-A1 appearance



1	Eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports
3	One console port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	6	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .
7	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	-	-

## Ports

**Table 4-1814** Ports on the S5735S-L8T4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE -T port	RJ45	A 10/100/1000BASE -T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>

Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> <li>● <b>FE SFP/eSFP optical modules (applicable in V200R021C00 and later versions)</b></li> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>Industrial optical modules (only optical modules with 1 Gbit/s transmission speed and transmission distances less than or equal to 10 km are supported)</b></li> <li>● <b>10GE SFP+ optical modules (only used for stack connection, OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules (only used for stack connection)</b></li> <li>● <b>10GE-DWDM SFP+ optical modules (only</b></li> </ul>

Port	Connector Type	Description	Available Components
			<p><b>used for stack connection)</b></p> <ul style="list-style-type: none"> <li>• <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

## Indicators and Buttons

The S5735S-L8T4S-A1 has similar indicators to those on the S5735S-L24P4X-A1 except that the S5735S-L8T4S-A1 does not have a PoE mode indicator. For details, see the S5735S-L24P4X-A1.

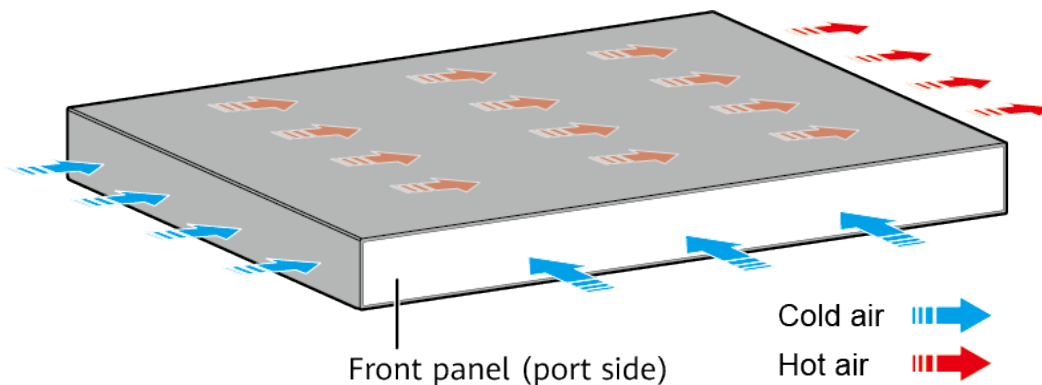
## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1815** Technical specifications of the S5735S-L8T4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.84 in. x 7.1 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 250.0 mm x 187.0 mm (1.72 in. x 9.84 in. x 7.36 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 370.0 mm x 380.0 mm (3.54 in. x 14.57 in. x 14.96 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	1.38 kg (3.04 lb)
Weight with packaging [kg(lb)]	2.02 kg (4.45 lb)
Typical power consumption [W]	21.2 W
Typical heat dissipation [BTU/hour]	72.34 BTU/hour
Maximum power consumption [W]	26.3 W
Maximum heat dissipation [BTU/hour]	89.74 BTU/hour
Static power consumption [W]	14.8 W
MTBF [years]	71.82 years
MTTR [hours]	2 hours
Availability	> 0.99999

Item	Specification
Noise at normal temperature (acoustic power) [dB(A)]	43 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.5 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) (0 m to 1800 m altitude, non-industrial optical modules) -5°C to +55°C (23°F to 131°F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F). The operating temperature ranges from -5°C to +45°C (23°F to 113°F) when optical modules with transmission distances greater than or equal to 70 km are used.
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 264 V AC; 45 Hz to 65 Hz
Maximum input current [A]	0.8 A

Item	Specification
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.33.2 S5735S-L8P4S-A1

### Overview

**Table 4-1816** Basic information about the S5735S-L8P4S-A1

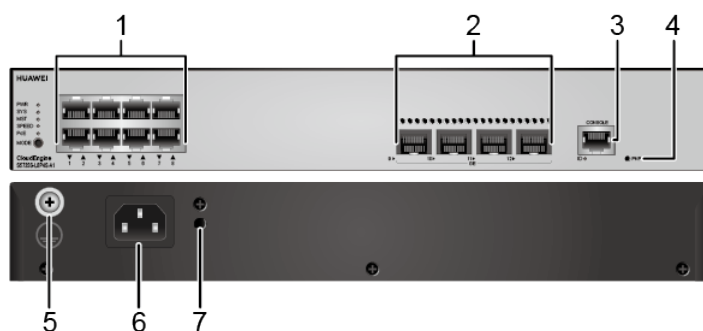
Item	Details
Description	S5735S-L8P4S-A1 (8*10/100/1000BASE-T ports, 4*GE SFP ports, PoE+, AC power)
Part Number	98011296
Model	S5735S-L8P4S-A1



Item	Details
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

Figure 4-644 S5735S-L8P4S-A1 appearance



1	Eight 10/100/1000BASE-T PoE+ ports	2	Four 1000BASE-X ports
3	One console port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .

7	Jack for AC power cable locking strap  <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	-	-
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## Ports

**Table 4-1817** Ports on the S5735S-L8P4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.  The port supports the PoE function.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> <li>• <b>FE SFP/eSFP optical modules (applicable in V200R021C00 and later versions)</b></li> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>Industrial optical modules (only optical modules with 1 Gbit/s transmission speed and transmission distances less than or equal to 10 km are supported)</b></li> <li>• <b>10GE SFP+ optical modules (only used for stack connection, OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules (only used for stack connection)</b></li> <li>• <b>10GE-DWDM SFP+ optical modules (only</b></li> </ul>

Port	Connector Type	Description	Available Components
			<p>used for stack connection)</p> <ul style="list-style-type: none"> <li>• 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection)</li> <li>• 3 m and 10 m SFP+ AOC cables (only used for stack connection)</li> <li>• 0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	Console cable

## Indicators and Buttons

The S5735S-L8P4S-A1 has the same types of indicators as the S5735S-L24P4X-A1. For details, see the S5735S-L24P4X-A1.

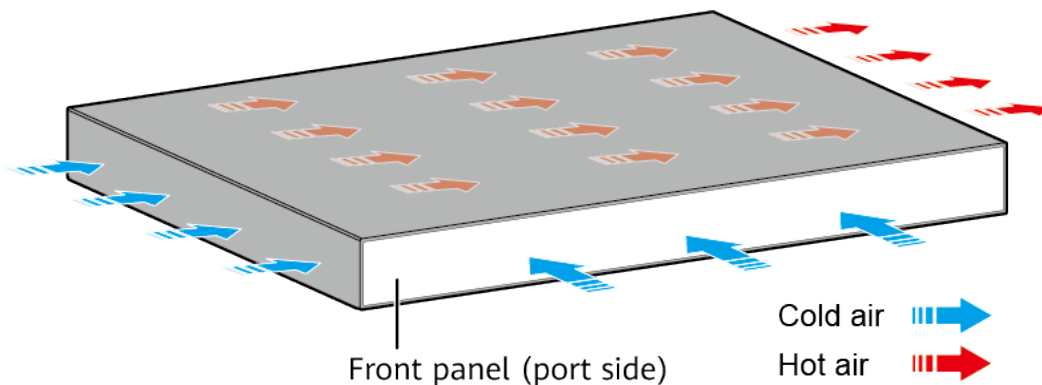
## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at.

## Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1818** Technical specifications of the S5735S-L8P4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 300.0 mm x 220.0 mm (1.72 in. x 11.8 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 300.0 mm x 227.0 mm (1.72 in. x 11.8 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	110.0 mm x 435.0 mm x 360.0 mm (4.33 in. x 17.13 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.25 kg (4.96 lb)
Weight with packaging [kg(lb)]	3.17 kg (7 lb)
Typical power consumption [W]	28.4 W
Typical heat dissipation [BTU/hour]	96.9 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Not providing the PoE function: 38.6 W</li> <li>100% PoE loads: 162.6 W (PoE: 124 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Not providing the PoE function: 131.71</li> <li>100% PoE loads: 554.81</li> </ul>

Item	Specification
Static power consumption [W]	22.6 W
MTBF [years]	66.56 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	42.2 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	30.5 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) (0 m to 1800 m altitude, non-industrial optical modules) -5°C to +55°C (23°F to 131°F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F). The operating temperature ranges from -5°C to +45°C (23°F to 113°F) when optical modules with transmission distances greater than or equal to 70 km are used.
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in

Item	Specification
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	3 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.33.3 S5735S-L24T4S-A1

## Overview

**Table 4-1819** Basic information about the S5735S-L24T4S-A1

Item	Details
Description	S5735S-L24T4S-A1 (24*10/100/1000BASE-T ports, 4*GE SFP ports, AC power)
Part Number	98011307
Model	S5735S-L24T4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

**Figure 4-645** S5735S-L24T4S-A1 appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports
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3	One console port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
7	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Ports

**Table 4-1820** Ports on the S5735S-L24T4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> <li>● <b>FE SFP/eSFP optical modules (applicable in V200R021C00 and later versions)</b></li> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>Industrial optical modules (only optical modules with 1 Gbit/s transmission speed and transmission distances less than or equal to 10 km are supported)</b></li> <li>● <b>10GE SFP+ optical modules (only used for stack connection, OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules (only used for stack connection)</b></li> <li>● <b>10GE-DWDM SFP+ optical modules (only</b></li> </ul>

Port	Connector Type	Description	Available Components
			<p><b>used for stack connection)</b></p> <ul style="list-style-type: none"> <li>• <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables (only used for stack connection)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

## Indicators and Buttons

The S5735S-L24T4S-A1 has similar indicators to those on the S5735S-L24P4X-A1 except that the S5735S-L24T4S-A1 does not have a PoE mode indicator. For details, see the S5735S-L24P4X-A1.

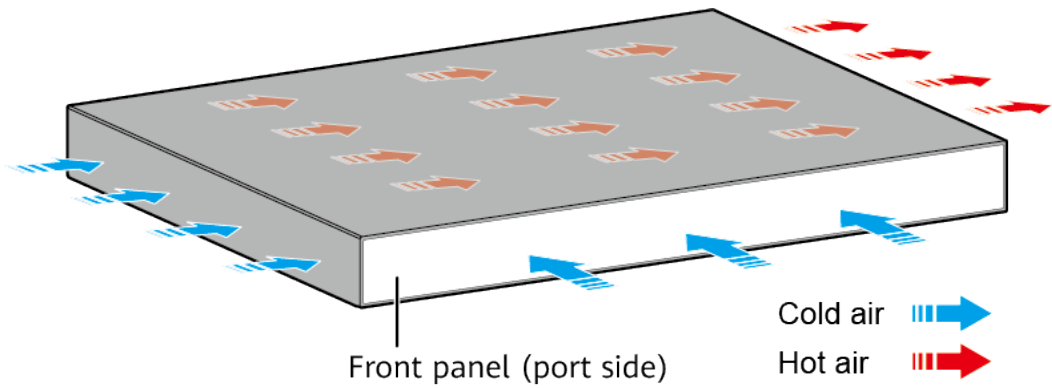
## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1821** Technical specifications of the S5735S-L24T4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.45 kg (5.4 lb)
Weight with packaging [kg(lb)]	3.34 kg (7.36 lb)
Typical power consumption [W]	32.7 W
Typical heat dissipation [BTU/hour]	111.58 BTU/hour
Maximum power consumption [W]	47.6 W
Maximum heat dissipation [BTU/hour]	162.42 BTU/hour
Static power consumption [W]	18.4 W
MTBF [years]	66.16 years
MTTR [hours]	2 hours
Availability	> 0.99999

Item	Specification
Noise at normal temperature (acoustic power) [dB(A)]	39 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) (0 m to 1800 m altitude, non-industrial optical modules) -5°C to +55°C (23°F to 131°F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F). The operating temperature ranges from -5°C to +45°C (23°F to 113°F) when optical modules with transmission distances greater than or equal to 70 km are used.
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>High-voltage DC input: 110 V DC to 250 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC; 47 Hz to 63 Hz</li> <li>High-voltage DC input: 88 V DC to 300 V DC</li> </ul>
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

#### 4.33.4 S5735S-L24P4S-A1

## Overview

**Table 4-1822** Basic information about the S5735S-L24P4S-A1

Item	Details
Description	S5735S-L24P4S-A1 (24*10/100/1000BASE-T ports, 4*GE SFP ports, PoE+, AC power)
Part Number	98011322
Model	S5735S-L24P4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

**Figure 4-646** S5735S-L24P4S-A1 appearance



1	Twenty-four 10/100/1000BASE-T PoE+ ports	2	Four 1000BASE-X ports
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3	One console port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
7	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Ports

**Table 4-1823** Ports on the S5735S-L24P4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	<a href="#">Ethernet cable</a>



Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> <li>● <b>FE SFP/eSFP optical modules (applicable in V200R021C00 and later versions)</b></li> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>10GE SFP+ optical modules (only used for stack connection, OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules (only used for stack connection)</b></li> <li>● <b>10GE-DWDM SFP+ optical modules (only used for stack connection)</b></li> <li>● <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables (only used for stack connection)</b></li> </ul>

Port	Connector Type	Description	Available Components
			<ul style="list-style-type: none"> <li>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	Console cable

## Indicators and Buttons

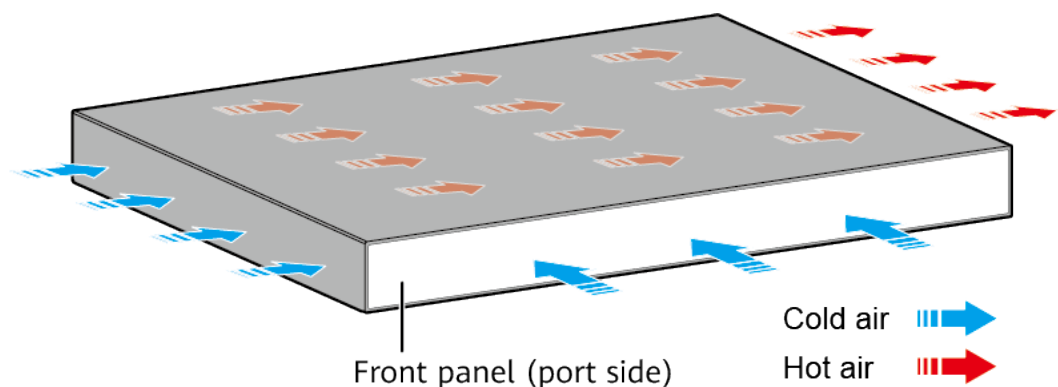
The S5735S-L24P4S-A1 has the same types of indicators as the S5735S-L24P4X-A1. For details, see the S5735S-L24P4X-A1.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1824** Technical specifications of the S5735S-L24P4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)  Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.94 kg (6.48 lb)
Weight with packaging [kg(lb)]	3.91 kg (8.62 lb)
Typical power consumption [W]	41.7 W
Typical heat dissipation [BTU/hour]	142.29 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Not providing the PoE function: 53.2 W</li> <li>100% PoE loads: 433.2 W (PoE: 380 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Not providing the PoE function: 181.52</li> <li>100% PoE loads: 1478.12</li> </ul>
Static power consumption [W]	29.6 W
MTBF [years]	55.72 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	50 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	38.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2

Item	Specification
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in

Item	Specification
Rated input voltage [V]	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum input current [A]	6 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.33.5 S5735S-L24T4X-A1

## Overview

**Table 4-1825** Basic information about the S5735S-L24T4X-A1

Item	Details
Description	S5735S-L24T4X-A1 (24*10/100/1000BASE-T ports, 4*XGE SFP+ ports, AC power)
Part Number	98011310
Model	S5735S-L24T4X-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

**Figure 4-647** S5735S-L24T4X-A1 appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
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3	One console port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
7	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Ports

**Table 4-1826** Ports on the S5735S-L24T4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules</b></li> <li>● <b>10GE-DWDM SFP+ optical modules</b></li> <li>● <b>Industrial optical modules (only optical modules with transmission distances less than or equal to 10 km are supported)</b></li> <li>● <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables</b></li> <li>● <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-</b></li> </ul>



Port	Connector Type	Description	Available Components
			<a href="#">configuration stacking</a> )
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>

## Indicators and Buttons

The S5735S-L24T4X-A1 has similar indicators to those on the S5735S-L24P4X-A1 except that the S5735S-L24T4X-A1 does not have a PoE mode indicator. For details, see the S5735S-L24P4X-A1.

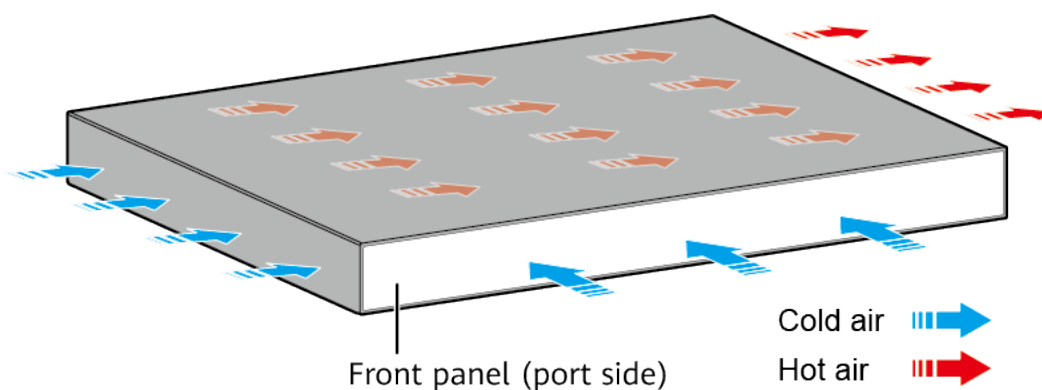
## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1827** Technical specifications of the S5735S-L24T4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.45 kg (5.4 lb)
Weight with packaging [kg(lb)]	3.34 kg (7.36 lb)
Typical power consumption [W]	32.7 W
Typical heat dissipation [BTU/hour]	111.58 BTU/hour
Maximum power consumption [W]	47.6 W
Maximum heat dissipation [BTU/hour]	162.42 BTU/hour
Static power consumption [W]	18.4 W
MTBF [years]	64.3 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	39 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported

Item	Specification
Long-term operating temperature [°C(°F)]	<p>-5°C to +50°C (23°F to 122°F) (0 m to 1800 m altitude, non-industrial optical modules)</p> <p>-5°C to +55°C (23°F to 131°F) (0 m to 1800 m altitude, industrial optical modules with transmission distances less than or equal to 10 km)</p>
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p> <p>The operating temperature ranges from -5°C to +45°C (23°F to 113°F) when optical modules with transmission distances greater than or equal to 70 km are used.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none"> <li>● AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>● High-voltage DC input: 110 V DC to 250 V DC</li> </ul>
Input voltage range [V]	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 264 V AC; 47 Hz to 63 Hz</li> <li>● High-voltage DC input: 88 V DC to 300 V DC</li> </ul>
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported

Item	Specification
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.33.6 S5735S-L24P4X-A1

#### Overview

**Table 4-1828** Basic information about the S5735S-L24P4X-A1

Item	Details
Description	S5735S-L24P4X-A1 (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power)
Part Number	98011328
Model	S5735S-L24P4X-A1
First supported version	V200R020C10

Item	Details
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

Figure 4-648 S5735S-L24P4X-A1 appearance



1	Twenty-four 10/100/1000BASE-T PoE+ ports	2	Four 10GE SFP+ ports
3	One console port	4	One PNP button  <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.  To reset the switch, press the button.  Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw  <b>NOTE</b> It is used with a <b>ground cable</b> .	6	Jack for AC power cable locking strap  <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.

7	AC socket  <b>NOTE</b> It is used with an <b>AC power cable</b> .	-	-
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## Ports

**Table 4-1829** Ports on the S5735S-L24P4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE -T PoE+ port	RJ45	A 10/100/1000BASE -T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.  The port supports the PoE function.	<b>Ethernet cable</b>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

## Indicators and Buttons

Figure 4-649 Indicators on the switch

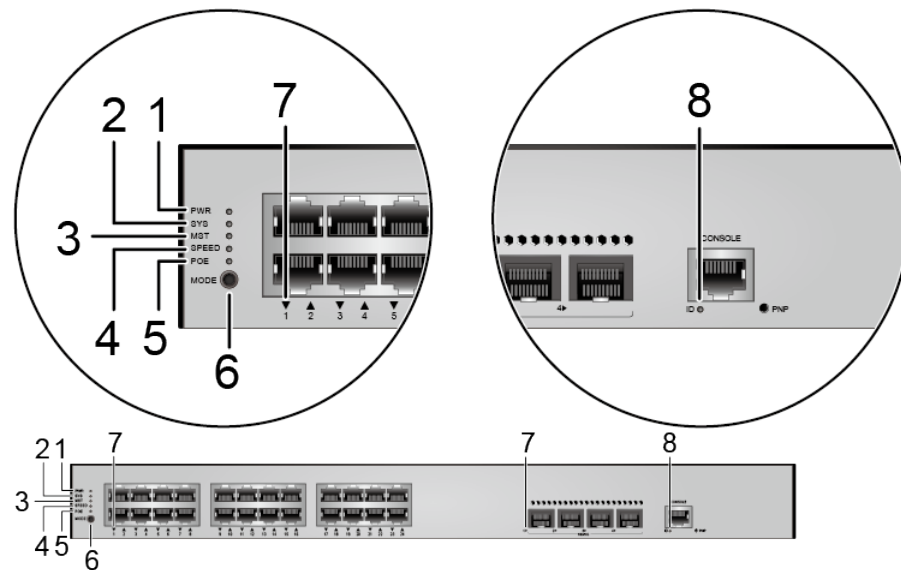


Table 4-1830 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.



No.	Indicator	Name	Color	Status	Description
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
5	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.

No.	Indicator	Name	Color	Status	Description
6	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p> <p><b>NOTE</b> Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> <li>If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows: <ul style="list-style-type: none"> <li>If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.</li> <li>If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.</li> </ul> </li> <li>If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.</li> </ul>

No.	Indicator	Name	Color	Status	Description
7	-	Service port indicator (one indicator for each port)	Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		<p>Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1831</a>.</p> <p><b>NOTE</b> If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.</p>
8	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.

**Table 4-1831** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	<p>The switch is not the master switch in a stack.</p> <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>

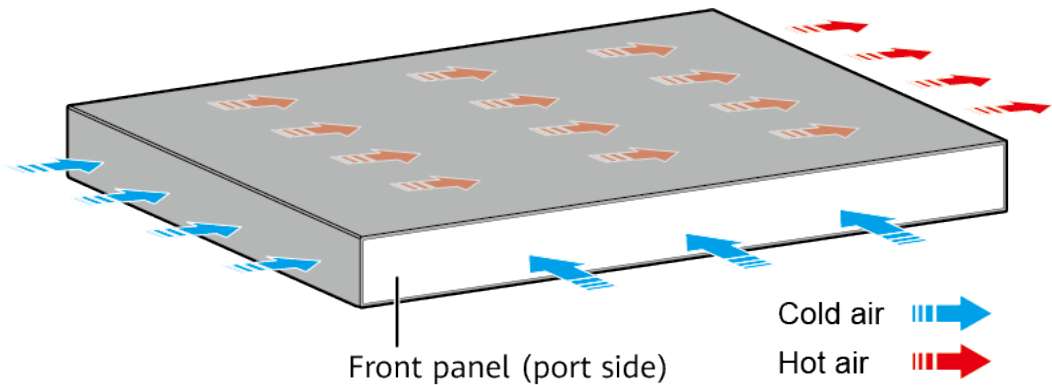
Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"><li>• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li><li>• If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li></ul>
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1832** Technical specifications of the S5735S-L24P4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.94 kg (6.48 lb)
Weight with packaging [kg(lb)]	3.91 kg (8.62 lb)
Typical power consumption [W]	41.7 W
Typical heat dissipation [BTU/hour]	142.29 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Not providing the PoE function: 53.2 W</li> <li>100% PoE loads: 433.2 W (PoE: 380 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Not providing the PoE function: 181.52</li> <li>100% PoE loads: 1478.12</li> </ul>

Item	Specification
Static power consumption [W]	29.6 W
MTBF [years]	55.72 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	50 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	38.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>• High-Voltage DC input: 240 V DC</li> </ul>
Input voltage range [V]	<ul style="list-style-type: none"> <li>• AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>• High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>

Item	Specification
Maximum input current [A]	6 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.33.7 S5735S-L32ST4X-A1

#### Overview

**Table 4-1833** Basic information about the S5735S-L32ST4X-A1

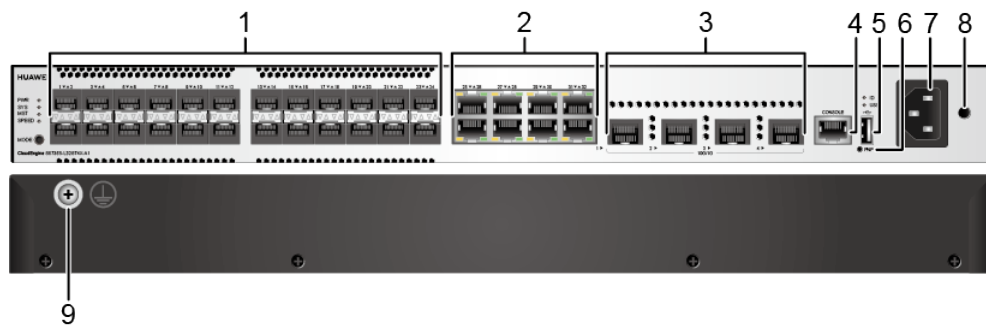
Item	Details
Description	S5735S-L32ST4X-A1 (24*GE SFP ports, 8*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power, front access)
Part Number	98011398



Item	Details
Model	S5735S-L32ST4X-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command to check the software versions supported by the device before performing a downgrade. If the device does not support the display system-software information command, it can be downgraded.

## Components

Figure 4-650 S5735S-L32ST4X-A1 appearance



1	Twenty-four 100/1000BASE-X ports	2	Eight 10/100/1000BASE-T ports
3	Four 10GE SFP+ ports	4	One console port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	-	-

## Ports

**Table 4-1834** Ports on the S5735S-L32ST4X-A1

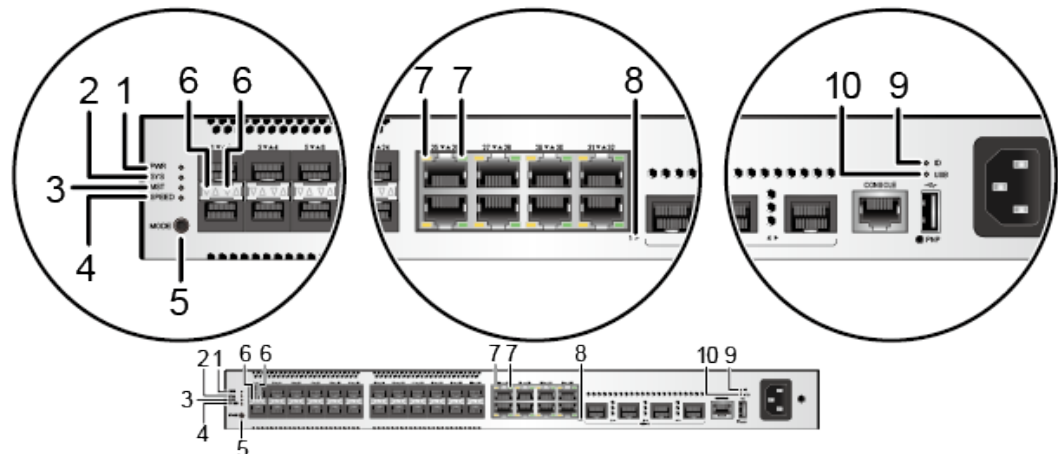
Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s.	<ul style="list-style-type: none"> <li>• <b>FE SFP/eSFP optical modules</b></li> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> </ul>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE-CWDM eSFP optical modules</b></li><li>• <b>GE-DWDM eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li><li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li><li>• <b>10GE-CWDM SFP+ optical modules</b></li><li>• <b>10GE-DWDM SFP+ optical modules</b></li><li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li><li>• <b>3 m and 10 m SFP+ AOC cables</b></li><li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li></ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

Figure 4-651 Indicators on the switch



**Table 4-1835** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.

No.	Indicator	Name	Color	Status	Description
			Green	Blinking	<ul style="list-style-type: none"><li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li><li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li></ul>
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.

No.	Indicator	Name	Color	Status	Description
5	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a third time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED indicator is off.</p> <p><b>NOTE</b>                      Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> <li>If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:                             <ul style="list-style-type: none"> <li>If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.</li> <li>If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.</li> </ul> </li> <li>If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.</li> </ul>

No.	Indicator	Name	Color	Status	Description
6	-	Optical service port indicator (two indicators for each port)	Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1836</a> and <a href="#">Table 4-1837</a> . <b>NOTE</b> If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.
7	-	Electrical service port indicator (two indicators for each port)	Each electrical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green).		
8	-	Optical service port indicator (one indicator for each port)	Each optical port has one single-color indicator. Arrowheads show the positions of ports.		
9	ID	ID indicator	-	Off	The ID indicator is not used (default state).



No.	Indicator	Name	Color	Status	Description
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
10	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Fast blinking	The system is reading data from a USB flash drive.
			Green	Slow blinking	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Fast blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1836** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed mode	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s.

**Table 4-1837** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode (LINK indicator)	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
Default mode (ACT indicator)	-	Off	The port is not connected or has been shut down, or no data is transmitted or received.
	Yellow	Blinking	The port is sending or receiving data.
MST stack mode (LINK and ACT indicators)	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on simultaneously	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green and yellow	Blinking simultaneously	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode (LINK indicator)	-	Off	The port is not connected or has been shut down.

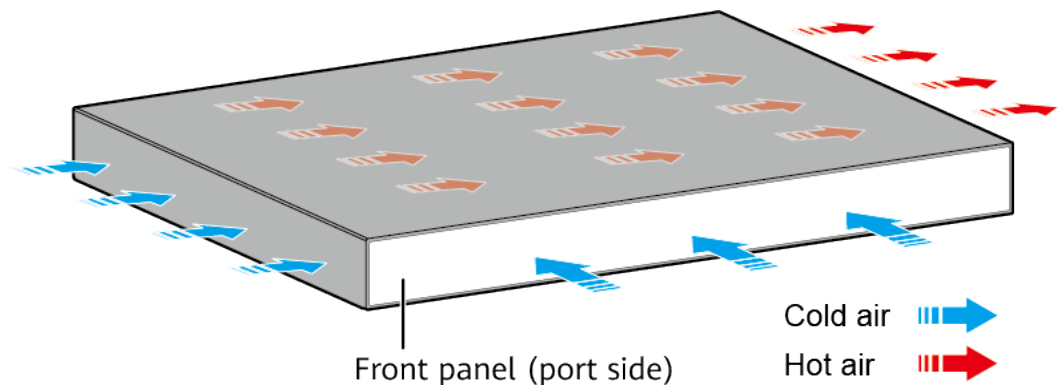
Display Mode	Color	Status	Description
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s.

### Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

### Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1838** Technical specifications of the S5735S-L32ST4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.88 kg (6.35 lb)
Weight with packaging [kg(lb)]	4.03 kg (8.89 lb)
Typical power consumption [W]	53.2 W
Typical heat dissipation [BTU/hour]	181.52 BTU/hour
Maximum power consumption [W]	66.8 W
Maximum heat dissipation [BTU/hour]	227.93 BTU/hour
Static power consumption [W]	39.3 W
MTBF [years]	58.44 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	46.8 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	35 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Specification
Short-term operating temperature [°C(°F)]	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 110 V DC to 250 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"><li>AC input: 90 V AC to 264 V AC; 47 Hz to 63 Hz</li><li>High-voltage DC input: 88 V DC to 300 V DC</li></ul>
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.33.8 S5735S-L48T4S-A1

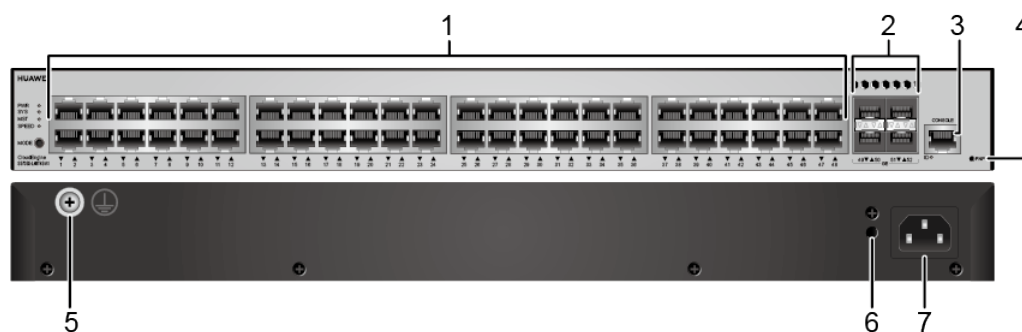
## Overview

**Table 4-1839** Basic information about the S5735S-L48T4S-A1

Item	Details
Description	S5735S-L48T4S-A1 (48*10/100/1000BASE-T ports, 4*GE SFP ports, AC power)
Part Number	98011335
Model	S5735S-L48T4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

**Figure 4-652** S5735S-L48T4S-A1 appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports
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3	One console port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
7	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Ports

**Table 4-1840** Ports on the S5735S-L48T4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>



Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> <li>● <b>FE SFP/eSFP optical modules (applicable in V200R021C00 and later versions)</b></li> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>10GE SFP+ optical modules (only used for stack connection, OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules (only used for stack connection)</b></li> <li>● <b>10GE-DWDM SFP+ optical modules (only used for stack connection)</b></li> <li>● <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables (only used for stack connection)</b></li> </ul>

Port	Connector Type	Description	Available Components
			<ul style="list-style-type: none"> <li>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	Console cable

## Indicators and Buttons

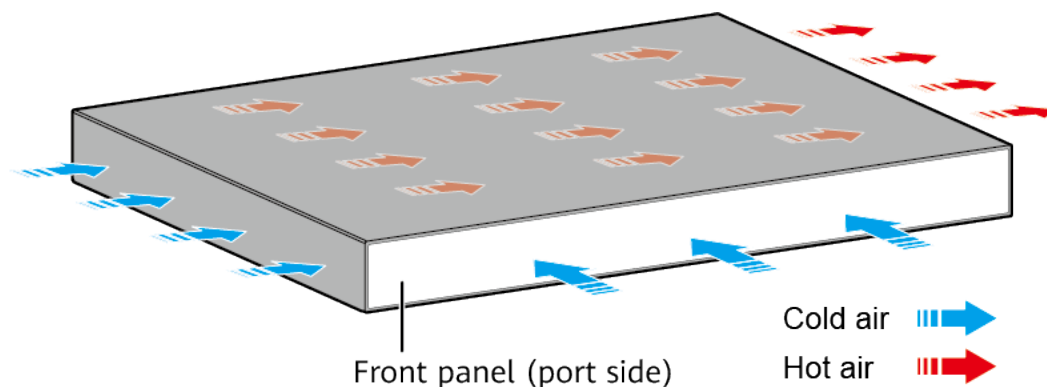
The S5735S-L48T4S-A1 has similar indicators to those on the S5735S-L48P4X-A1 except that the S5735S-L48T4S-A1 does not have USB and PoE mode indicators. For details, see the S5735S-L48P4X-A1.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1841** Technical specifications of the S5735S-L48T4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.76 kg (6.09 lb)
Weight with packaging [kg(lb)]	3.74 kg (8.25 lb)
Typical power consumption [W]	43.3 W
Typical heat dissipation [BTU/hour]	147.74 BTU/hour
Maximum power consumption [W]	50.4 W
Maximum heat dissipation [BTU/hour]	171.97 BTU/hour
Static power consumption [W]	20.3 W
MTBF [years]	56.7 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	48 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	36.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Specification
Short-term operating temperature [°C(°F)]	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The operating temperature ranges from -5°C to +45°C (23°F to 113°F) when optical modules with transmission distances greater than or equal to 70 km are used.</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in

Item	Specification
Rated input voltage [V]	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>High-voltage DC input: 110 V DC to 250 V DC</li> </ul>
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC; 47 Hz to 63 Hz</li> <li>High-voltage DC input: 88 V DC to 300 V DC</li> </ul>
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.33.9 S5735S-L48P4S-A1

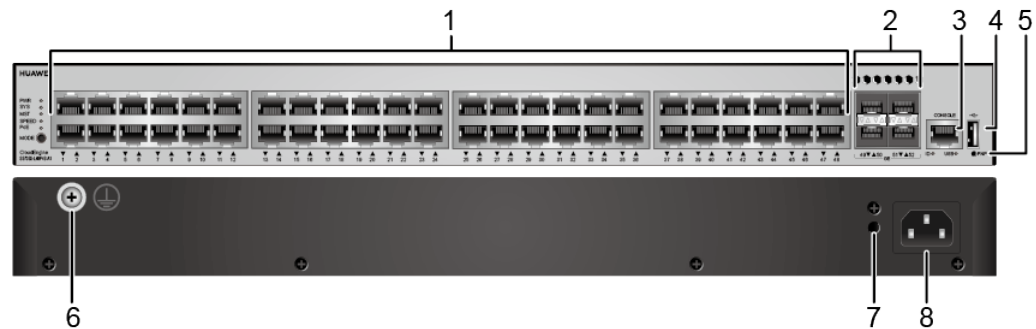
## Overview

**Table 4-1842** Basic information about the S5735S-L48P4S-A1

Item	Details
Description	S5735S-L48P4S-A1 (48*10/100/1000BASE-T ports, 4*GE SFP ports, PoE+, AC power)
Part Number	98011346
Model	S5735S-L48P4S-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

**Figure 4-653** S5735S-L48P4S-A1 appearance



1	Forty-eight 10/100/1000BASE-T PoE + ports	2	Four 1000BASE-X ports
3	One console port	4	One USB port

5	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>
7	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b></p> <p>The AC power cable locking strap is not delivered with the switch.</p>	8	<p>AC socket</p> <p><b>NOTE</b></p> <p>It is used with an <b>AC power cable</b>.</p>

## Ports

**Table 4-1843** Ports on the S5735S-L48P4S-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	<p>A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.</p> <p>The port supports the PoE function.</p>	<b>Ethernet cable</b>

Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	A 1000BASE-X port can send and receive data at 100 or 1000 Mbit/s.	<ul style="list-style-type: none"> <li>● <b>FE SFP/eSFP optical modules (applicable in V200R021C00 and later versions)</b></li> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>10GE SFP+ optical modules (only used for stack connection, OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules (only used for stack connection)</b></li> <li>● <b>10GE-DWDM SFP+ optical modules (only used for stack connection)</b></li> <li>● <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection)</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables (only used for stack connection)</b></li> </ul>



Port	Connector Type	Description	Available Components
			<ul style="list-style-type: none"> <li>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	Console cable
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

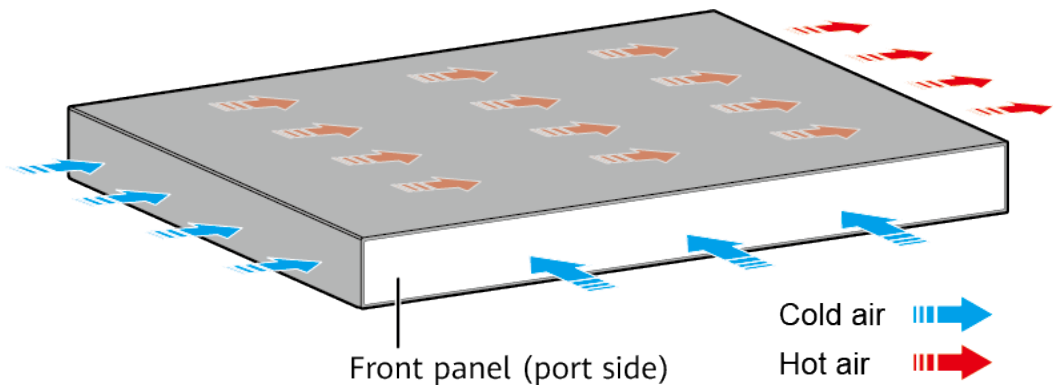
The S5735S-L48P4S-A1 has the same types of indicators as the S5735S-L48P4X-A1. For details, see the S5735S-L48P4X-A1.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1844** Technical specifications of the S5735S-L48P4S-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.23 kg (7.12 lb)
Weight with packaging [kg(lb)]	4.28 kg (9.44 lb)
Typical power consumption [W]	58.7 W

Item	Specification
Typical heat dissipation [BTU/hour]	200.29 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>● Not providing the PoE function: 76.1 W</li> <li>● 100% PoE loads: 456.1 W (PoE: 380 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>● Not providing the PoE function: 259.66</li> <li>● 100% PoE loads: 1556.26</li> </ul>
Static power consumption [W]	35.3 W
MTBF [years]	44.9 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	50 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	38.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>• High-Voltage DC input: 240 V DC</li> </ul>
Input voltage range [V]	<ul style="list-style-type: none"> <li>• AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>• High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>

Item	Specification
Maximum input current [A]	6 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.33.10 S5735S-L48T4X-A1

### Overview

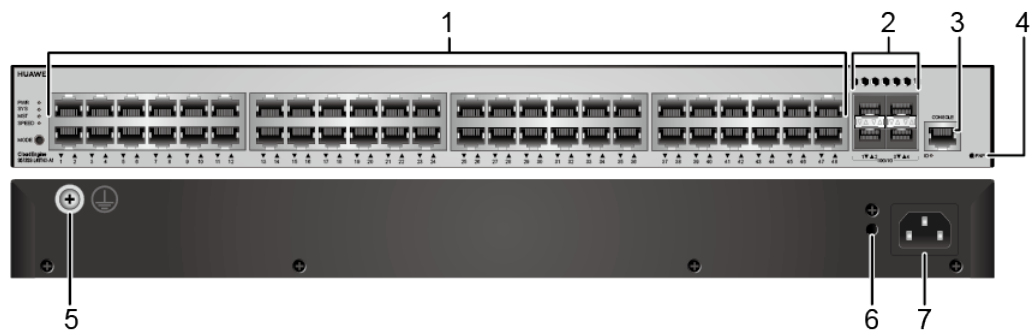
**Table 4-1845** Basic information about the S5735S-L48T4X-A1

Item	Details
Description	S5735S-L48T4X-A1 (48*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)
Part Number	98011338

Item	Details
Model	S5735S-L48T4X-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

Figure 4-654 S5735S-L48T4X-A1 appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	6	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.

7	AC socket  <b>NOTE</b> It is used with an <b>AC power cable</b> .	-	-
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## Ports

**Table 4-1846** Ports on the S5735S-L48T4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE -T port	RJ45	A 10/100/1000BASE -T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>



## Indicators and Buttons

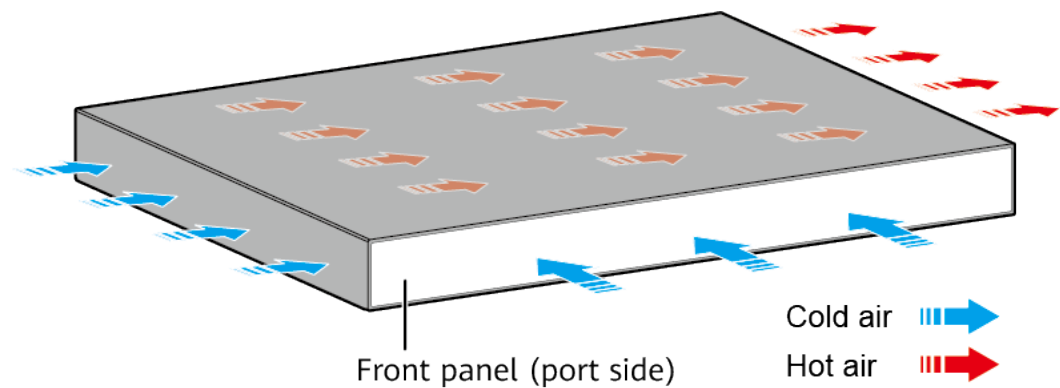
The S5735S-L48T4X-A1 has similar indicators to those on the S5735S-L48P4X-A1 except that the S5735S-L48T4S-A1 does not have USB and PoE mode indicators. For details, see the S5735S-L48P4X-A1.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1847** Technical specifications of the S5735S-L48T4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)  Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U

Item	Specification
Weight without packaging [kg(lb)]	2.76 kg (6.09 lb)
Weight with packaging [kg(lb)]	3.74 kg (8.25 lb)
Typical power consumption [W]	43.3 W
Typical heat dissipation [BTU/hour]	147.74 BTU/hour
Maximum power consumption [W]	50.4 W
Maximum heat dissipation [BTU/hour]	171.97 BTU/hour
Static power consumption [W]	20.3 W
MTBF [years]	55.33 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	48 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	36.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The operating temperature ranges from -5°C to +45°C (23°F to 113°F) when optical modules with transmission distances greater than or equal to 70 km are used.</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"><li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li><li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li><li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li></ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none"><li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li><li>• High-voltage DC input: 110 V DC to 250 V DC</li></ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC; 47 Hz to 63 Hz</li> <li>High-voltage DC input: 88 V DC to 300 V DC</li> </ul>
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.33.11 S5735S-L48P4X-A1

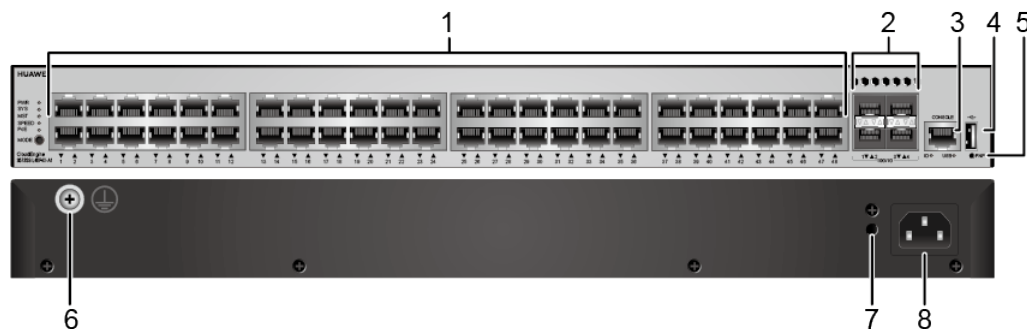
## Overview

**Table 4-1848** Basic information about the S5735S-L48P4X-A1

Item	Details
Description	S5735S-L48P4X-A1 (48*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power)
Part Number	98011344
Model	S5735S-L48P4X-A1
First supported version	V200R020C10
Remarks	Some models cannot be downgraded due to component upgrade. Therefore, you are advised to run the display system-software information command (supported in V200R021C00 and later versions) to check the software versions supported by the device before performing a downgrade.

## Components

**Figure 4-655** S5735S-L48P4X-A1 appearance



1	Forty-eight 10/100/1000BASE-T PoE + ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port

5	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>
7	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b></p> <p>The AC power cable locking strap is not delivered with the switch.</p>	8	<p>AC socket</p> <p><b>NOTE</b></p> <p>It is used with an <b>AC power cable</b>.</p>

## Ports

**Table 4-1849** Ports on the S5735S-L48P4X-A1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	<p>A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.</p> <p>The port supports the PoE function.</p>	<b>Ethernet cable</b>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive



## Indicators and Buttons

Figure 4-656 Indicators on the switch

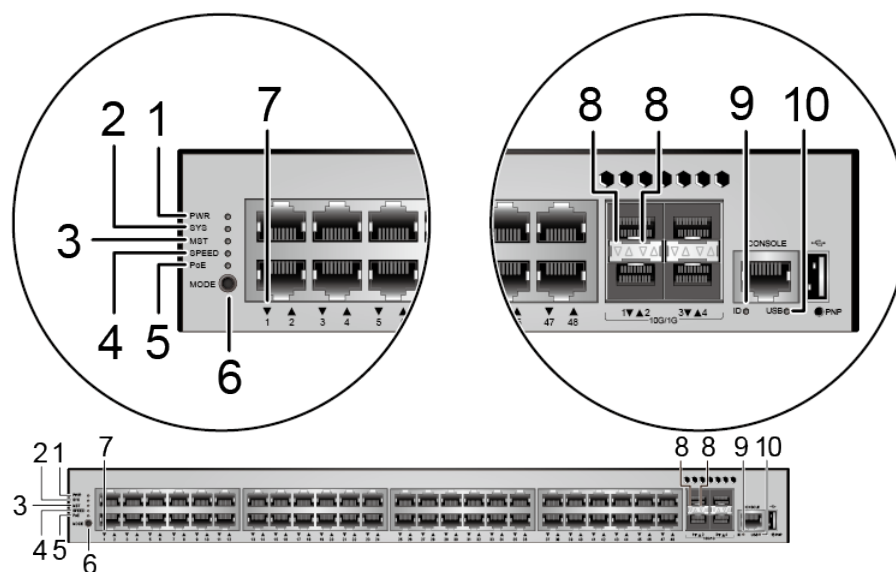


Table 4-1850 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.

No.	Indicator	Name	Color	Status	Description
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
5	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.

No.	Indicator	Name	Color	Status	Description
6	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p> <p><b>NOTE</b> Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> <li>If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows: <ul style="list-style-type: none"> <li>If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.</li> <li>If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.</li> </ul> </li> <li>If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.</li> </ul>

No.	Indicator	Name	Color	Status	Description
7	-	Electrical service port indicator (one indicator for each port)	Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		<p>Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1851</a> and <a href="#">Table 4-1852</a>.</p> <p><b>NOTE</b> If a power failure occurs on a device's PCB board, indicators of the last four optical ports on the device's front panel blink green cyclically at an interval of 1 second, with each indicator illuminating for 0.25 seconds.</p>
8	-	Optical service port indicator (two indicators for each port)	<p>Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green).</p> <p>Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.</p>		
9	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.

No.	Indicator	Name	Color	Status	Description
10	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Fast blinking	The system is reading data from a USB flash drive.
			Green	Slow blinking	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Fast blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1851** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.

**Table 4-1852** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode (LINK indicator)	-	Off	The port is not connected or has been shut down.

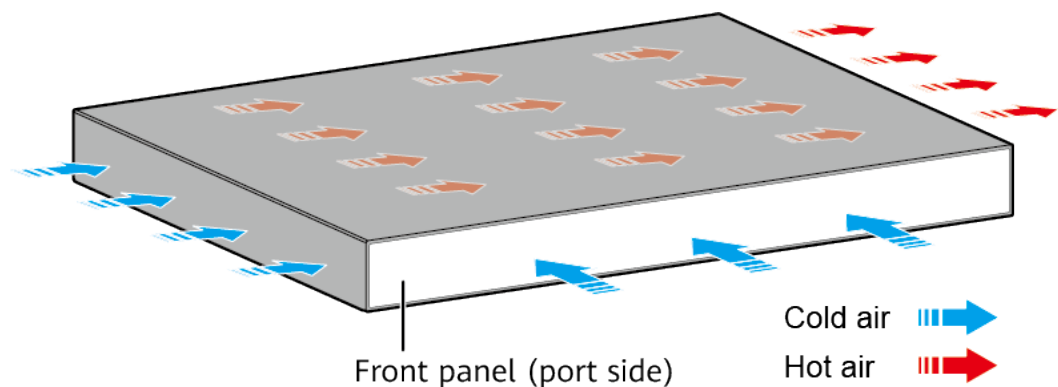
Display Mode	Color	Status	Description
	Green	Steady on	A link has been established on the port.
Default mode (ACT indicator)	-	Off	The port is not connected or has been shut down, or no data is transmitted or received.
	Yellow	Blinking	The port is sending or receiving data.
Speed mode (LINK indicator)	-	Off	The port is not connected or has been shut down.
	Green	Steady on	1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	1000M/10GE port: The port is operating at 10 Gbit/s.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

## Heat Dissipation System

The switch has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1853** Technical specifications of the S5735S-L48P4X-A1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)  Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.23 kg (7.12 lb)
Weight with packaging [kg(lb)]	4.28 kg (9.44 lb)
Typical power consumption [W]	58.7 W
Typical heat dissipation [BTU/hour]	200.29 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Not providing the PoE function: 76.1 W</li> <li>100% PoE loads: 456.1 W (PoE: 380 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Not providing the PoE function: 259.66</li> <li>100% PoE loads: 1556.26</li> </ul>
Static power consumption [W]	35.3 W
MTBF [years]	44.03 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	50 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	38.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	2



Item	Specification
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in

Item	Specification
Rated input voltage [V]	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum input current [A]	6 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.34 S5735S-L-M

### 4.34.1 S5735S-L24T4S-MA

## Version Mapping

**Table 4-1854** lists the mapping between the S5735S-L24T4S-MA chassis and software versions.

**Table 4-1854** Version mapping

Series	Model	Software Version
S5735S-L-M	S5735S-L24T4S-MA	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-657** S5735S-L24T4S-MA appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module (applicable in V200R021C00 and later versions)</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (only used for stack connection, a maximum transmission distance of 0.4 km, OSXD22N00 not supported, applicable in V200R019C10 and later versions)</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1855](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1855** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1856](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1856** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used

Attribute	Description
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1857](#).

**Table 4-1857** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1858](#) describes the attributes of an ETH management port.

**Table 4-1858** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5735S-L24T4S-MA has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L24T4S-MA does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735S-L24T4S-MA has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation

The S5735S-L24T4S-MA has no fans and uses natural heat dissipation.

## Technical Specifications

[Table 4-1859](#) lists technical specifications of the S5735S-L24T4S-MA.

**Table 4-1859** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	92.82 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4.08 kg (9 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum power consumption (100% throughput)	34 W
Typical power consumption (30% of traffic load)	28 W <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>



Item	Description
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p> <p>The operating temperature of the switch is -5°C to +40°C (23°F to 104°F) when it uses GE SFP optical modules with 40 km or longer transmission distance.</p> <p>When SFP+ copper cables or dedicated stack cables are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> <li>-5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM)</li> </ul> <p>When SFP+ AOC cables or 10GE SFP+ optical modules are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> <li>-5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM)</li> </ul>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>EMC certification</li> <li>Safety certification</li> <li>Manufacturing certification</li> </ul>
Part number	98010916

## 4.34.2 S5735S-L24P4S-MA

### Version Mapping

[Table 4-1860](#) lists the mapping between the S5735S-L24P4S-MA chassis and software versions.

**Table 4-1860** Version mapping

Series	Model	Software Version
S5735S-L-M	S5735S-L24P4S-MA	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-658** S5735S-L24P4S-MA appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• FE optical module (applicable in V200R021C00 and later versions)</li> <li>• GE optical module</li> <li>• GE-CWDM optical module</li> <li>• GE-DWDM optical module</li> <li>• GE copper module</li> <li>• 10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions)</li> <li>• 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)</li> <li>• 3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)</li> <li>• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1861](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1861** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1862](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1862** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used

Attribute	Description
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1863](#).

**Table 4-1863** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1864](#) describes the attributes of an ETH management port.

**Table 4-1864** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

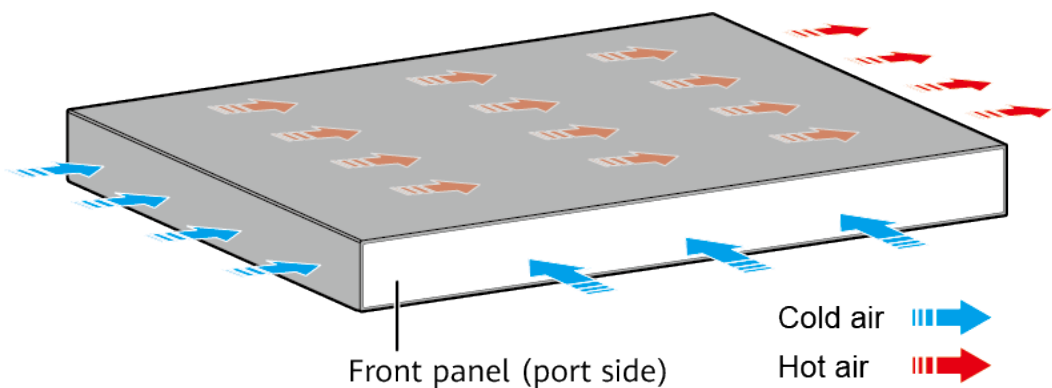
The S5735S-L24P4S-MA has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735S-L24P4S-MA has a built-in power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

## Heat Dissipation

The S5735S-L24P4S-MA has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



#### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1865** lists technical specifications of the S5735S-L24P4S-MA.

**Table 4-1865** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	76.1 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4.31 kg (9. lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>• Not providing the PoE function: 53 W</li> <li>• 100% PoE loads: 451 W (PoE: 380 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	39 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.                     The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)



Item	Description
Noise under normal temperature (27°C, sound power)	< 57.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010926

### 4.34.3 S5735S-L48T4S-MA

#### Version Mapping

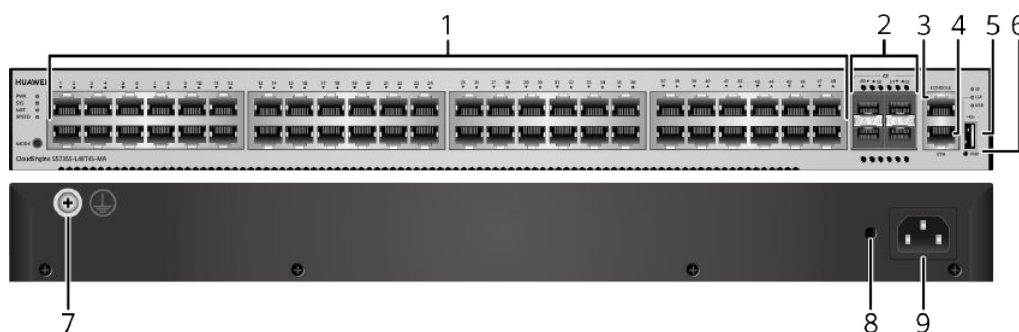
[Table 4-1866](#) lists the mapping between the S5735S-L48T4S-MA chassis and software versions.

**Table 4-1866** Version mapping

Series	Model	Software Version
S5735S-L-M	S5735S-L48T4S-MA	Supported in V200R019C10SPC500 and later versions <b>NOTE</b> V200R021C01 is not supported.

#### Appearance and Structure

**Figure 4-659** S5735S-L48T4S-MA appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module (applicable in V200R021C00 and later versions)</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions)</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.
9	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1867](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1867** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1868](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1868** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used

Attribute	Description
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1869](#).

**Table 4-1869** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1870](#) describes the attributes of an ETH management port.

**Table 4-1870** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

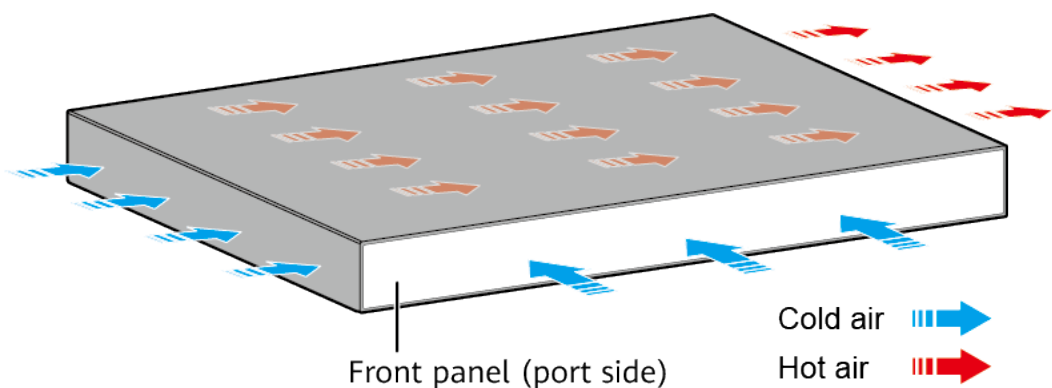
The S5735S-L48T4S-MA has similar indicators to those on the S5735S-L12P4S-A except that the S5735S-L48T4S-MA does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735S-L48T4S-MA has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation

The S5735S-L48T4S-MA has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



#### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1871](#) lists technical specifications of the S5735S-L48T4S-MA.

**Table 4-1871** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	46.36 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)</li> </ul>
Weight (with packaging)	4.42 kg (9.75 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	53 W

Item	Description
<p>Typical power consumption (30% of traffic load)</p> <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	<p>37 W</p>
<p>Operating temperature</p>	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b>  When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>
<p>Short-term operating temperature</p>	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b>  When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 50°C (122°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 50°C (122°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
<p>Storage temperature</p>	<p>-40°C to +70°C (-40°F to +158°F)</p>
<p>Noise under normal temperature (27°C, sound power)</p>	<p>&lt; 53.3 dB(A)</p>
<p>Relative humidity</p>	<p>5% to 95%, noncondensing</p>

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010971

## 4.35 S5735-L-I

### 4.35.1 S5735-L8T4X-IA1

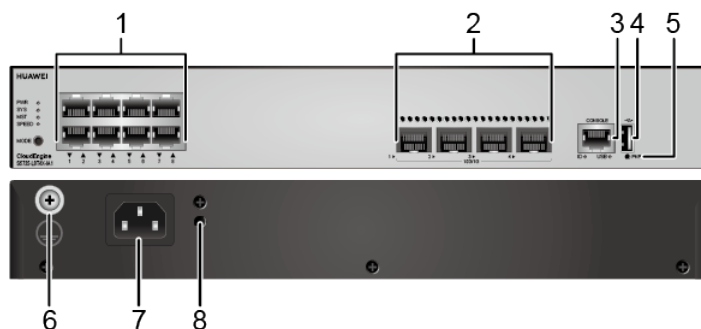
#### Overview

**Table 4-1872** Basic information about the S5735-L8T4X-IA1

Item	Details
Description	S5735-L8T4X-IA1 (8*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)
Part Number	98011581
Model	S5735-L8T4X-IA1
First supported version	V200R021C00

#### Components

**Figure 4-660** S5735-L8T4X-IA1 appearance





1	Eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port
5	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>
7	<p>AC socket</p> <p><b>NOTE</b></p> <p>It is used with an <b>AC power cable</b>.</p>	8	<p>Jack for AC power cable locking strap</p> <p><b>NOTE</b></p> <p>The AC power cable locking strap is not delivered with the switch.</p>

## Ports

**Table 4-1873** Ports on the S5735-L8T4X-IA1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<b>Ethernet cable</b>
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<b>Industrial optical modules</b>

Port	Connector Type	Description	Available Components
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>
USB port	USB 2.0 Type A	The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.  USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.	USB flash drive

## Indicators and Buttons

The S5735-L8T4X-IA1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L8T4X-IA1 does not have a PoE mode indicator. For details, see the S5735-L24P4X-A1.

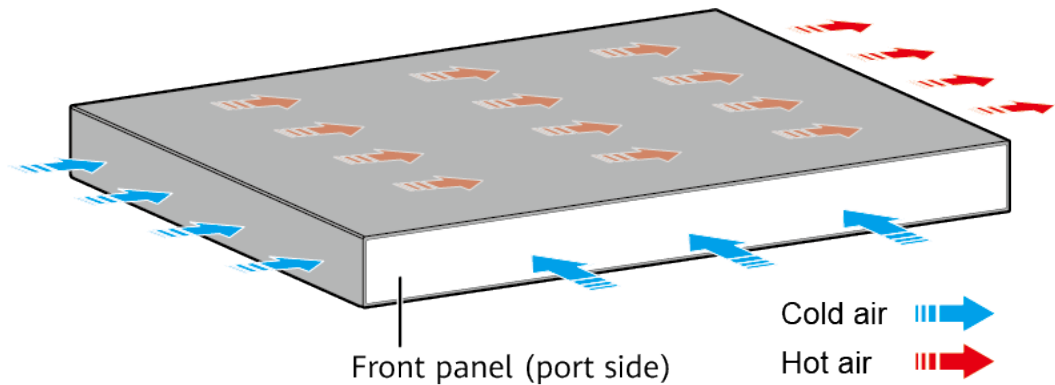
## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1874** Technical specifications of the S5735-L8T4X-IA1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 300.0 mm x 220.0 mm (1.72 in. x 11.81 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 300.0 mm x 227.0 mm (1.72 in. x 11.81 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	110.0 mm x 435.0 mm x 360.0 mm (4.33 in. x 17.13 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	1.97 kg (4.34 lb)
Weight with packaging [kg(lb)]	2.78 kg (6.13 lb)
Typical power consumption [W]	23.5 W
Typical heat dissipation [BTU/hour]	80.18 BTU/hour
Maximum power consumption [W]	30 W
Maximum heat dissipation [BTU/hour]	102.36 BTU/hour
Static power consumption [W]	15.4 W

Item	Specification
MTBF [years]	67.07 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	43 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	31.5 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-40°C to +65°C (-40°F to +149°F) at an altitude of 0–1800 m (0–5906 ft.) <b>NOTE</b> -40°C to -30°C (-40°F to -22°F): Stable port performance can be achieved only when at least two Ethernet electrical ports go Up.
Short-term operating temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F) at an altitude of 0–1800 m (0–5906 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 65°C (149°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 65°C (149°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 65°C (149°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +75°C (-40°F to +167°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 264 V AC; 45 Hz to 65 Hz
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB

Item	Specification
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.35.2 S5735-L8P4X-IA1

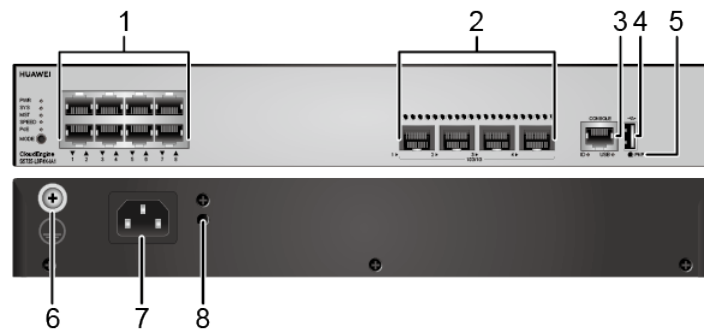
### Overview

**Table 4-1875** Basic information about the S5735-L8P4X-IA1

Item	Details
Description	S5735-L8P4X-IA1 (8*10/100/1000BASE-T ports, 4*10GE SFP+ ports, PoE+, AC power)
Part Number	98011579
Model	S5735-L8P4X-IA1
First supported version	V200R021C00

## Components

Figure 4-661 S5735-L8P4X-IA1 appearance



1	Eight 10/100/1000BASE-T PoE+ ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port
5	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .
7	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .	8	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.

## Ports

**Table 4-1876** Ports on the S5735-L8P4X-IA1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s. The port supports the PoE function.	<a href="#">Ethernet cable</a>
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<a href="#">Industrial optical modules</a>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>



Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

The S5735-L8P4X-IA1 has the same types of indicators as the S5735-L24P4X-A1. For details, see the S5735-L24P4X-A1.

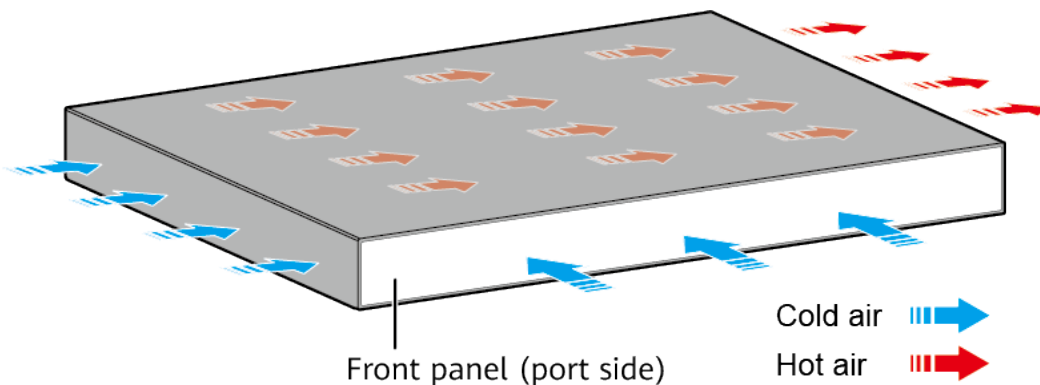
## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at.

## Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1877** Technical specifications of the S5735-L8P4X-IA1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 300.0 mm x 220.0 mm (1.72 in. x 11.81 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 300.0 mm x 227.0 mm (1.72 in. x 11.81 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	110.0 mm x 435.0 mm x 360.0 mm (4.33 in. x 17.13 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.23 kg (4.92 lb)
Weight with packaging [kg(lb)]	3.04 kg (6.7 lb)
Typical power consumption [W]	26.2 W
Typical heat dissipation [BTU/hour]	89.40 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>Without PoE: 33 W</li> <li>Full PoE load: 178 W (PoE: 124 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>Without PoE: 112.60</li> <li>Full PoE load: 607.35</li> </ul>
Static power consumption [W]	18.7 W

Item	Specification
MTBF [years]	62.46 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	42.2 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	30.5 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-40°C to +65°C (-40°F to +149°F) at an altitude of 0–1800 m (0–5906 ft.) <b>NOTE</b> -40°C to -30°C (-40°F to -22°F): Stable port performance can be achieved only when at least two Ethernet electrical ports go Up.
Short-term operating temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 65°C (149°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 65°C (149°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 65°C (149°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +75°C (-40°F to +167°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	3 A
Memory	512 MB
Flash memory	512 MB

Item	Specification
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

### 4.35.3 S5735-L24T4X-IA1

#### Overview

**Table 4-1878** Basic information about the S5735-L24T4X-IA1

Item	Details
Description	S5735-L24T4X-IA1 (24*10/100/1000BASE-T ports, 4*10GE SFP+ ports, AC power)
Part Number	98011597
Model	S5735-L24T4X-IA1
First supported version	V200R021C00

## Components

Figure 4-662 S5735-L24T4X-IA1 appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports
3	One console port	4	One USB port
5	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .
7	Jack for AC power cable locking strap <b>NOTE</b> The AC power cable locking strap is not delivered with the switch.	8	AC socket <b>NOTE</b> It is used with an <b>AC power cable</b> .

## Ports

**Table 4-1879** Ports on the S5735-L24T4X-IA1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.	<a href="#">Ethernet cable</a>
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<a href="#">Industrial optical modules</a>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

The S5735-L24T4X-IA1 has similar indicators to those on the S5735-L24P4X-A1 except that the S5735-L24T4X-IA1 does not have a PoE mode indicator. For details, see the S5735-L24P4X-A1.

## Power Supply System

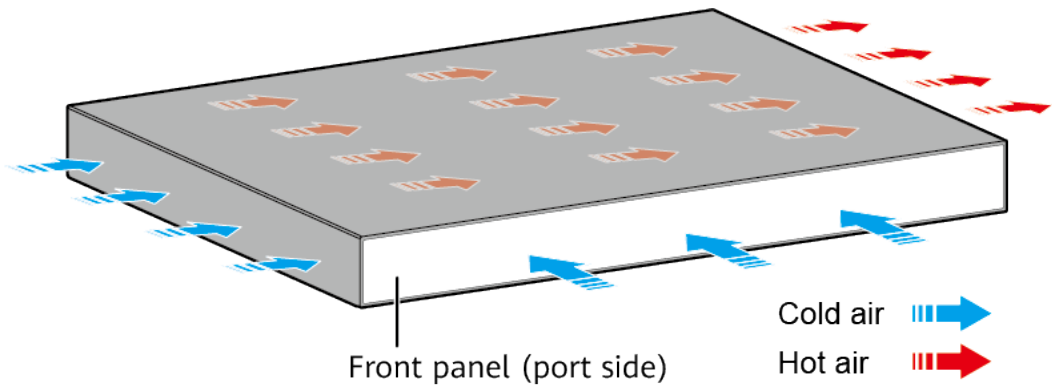
The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

When working properly at a normal temperature, the device meets the desktop-class noise requirements. However, the fan speed may be high and the noise may be loud during device startup.





**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1880** Technical specifications of the S5735-L24T4X-IA1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.5 kg (5.51 lb)
Weight with packaging [kg(lb)]	3.3 kg (7.28 lb)
Typical power consumption [W]	29.8 W
Typical heat dissipation [BTU/hour]	101.68 BTU/hour
Maximum power consumption [W]	46 W
Maximum heat dissipation [BTU/hour]	155.96 BTU/hour
Static power consumption [W]	21.8 W
MTBF [years]	62.05 years
MTTR [hours]	2 hours
Availability	> 0.99999

Item	Specification
Noise at normal temperature (acoustic power) [dB(A)]	39 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	27.2 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	1
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-40°C to +65°C (-40°F to +149°F) at an altitude of 0–1800 m (0–5906 ft.) <b>NOTE</b> -40°C to -30°C (-40°F to -22°F): Stable port performance can be achieved only when at least four of the first eight Ethernet electrical ports go Up.
Short-term operating temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F) at an altitude of 0–1800 m (0–5906 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 65°C (149°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 65°C (149°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 65°C (149°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +75°C (-40°F to +167°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 110 V DC to 250 V DC</li> </ul>
Input voltage range [V]	<ul style="list-style-type: none"> <li>• AC input: 90 V AC to 264 V AC; 47 Hz to 63 Hz</li> <li>• High-voltage DC input: 88 V DC to 300 V DC</li> </ul>

Item	Specification
Maximum input current [A]	2 A
Memory	512 MB
Flash memory	512 MB
Console port	RJ45
Eth Management port	Not supported
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 7$ kV
Power supply surge protection [kV]	$\pm 6$ kV in differential mode, $\pm 6$ kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.36 S5735-S

### 4.36.1 S5735-S24T4X

#### Version Mapping

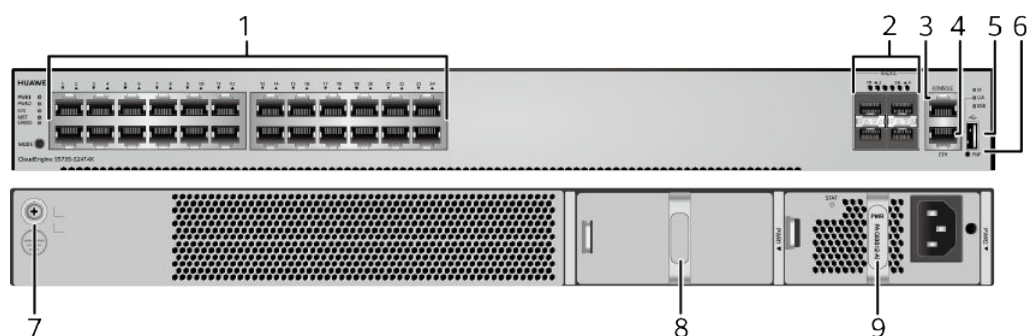
[Table 4-1881](#) lists the mapping between the S5735-S24T4X chassis and software versions.

**Table 4-1881** Version mapping

Series	Model	Software Version
S5735-S	S5735-S24T4X	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-663** S5735-S24T4X appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port

5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Power module slot 1 <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <a href="#">5.11 PAC60S12-AR (60 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>
9	Power module slot 2 <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <a href="#">5.11 PAC60S12-AR (60 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1882](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1882** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1883](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1883** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1884](#).

**Table 4-1884** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1885](#) describes the attributes of an ETH management port.

**Table 4-1885** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5735-S24T4X has similar indicators to those on the S5735-S24P4X except that the S5735-S24T4X does not have a PoE mode indicator. For details, see [Indicator Description](#).

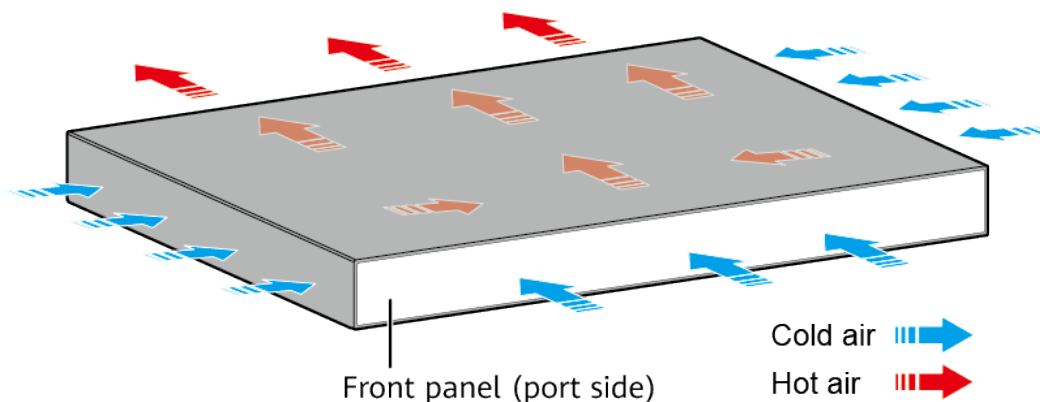
## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.



## Heat Dissipation

The S5735-S24T4X has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1886](#) lists technical specifications of the S5735-S24T4X.

**Table 4-1886** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	69.42 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>● Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>● Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)</li> </ul>
Weight (with packaging)	7.21 kg (15.9 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>● AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>● High-Voltage DC input: 240 V DC</li> <li>● DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>● High-Voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	46 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>● Tested according to ATIS standard</li> <li>● EEE enabled</li> <li>● No PoE power consumption</li> </ul>	31 W

Item	Description
Operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010938

## 4.36.2 S5735-S24P4X

### Version Mapping

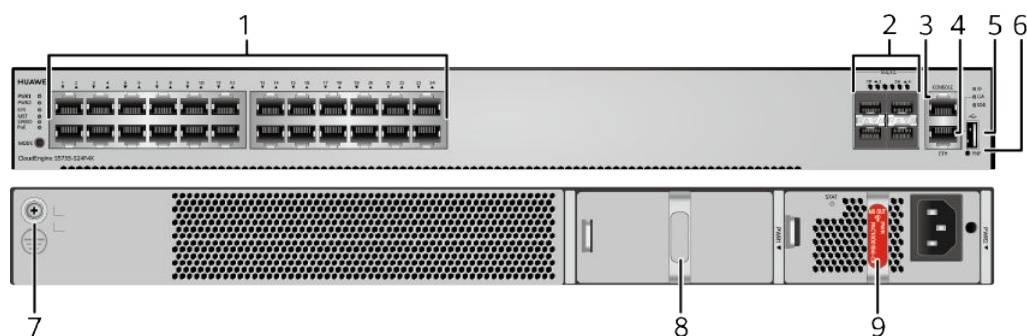
**Table 4-1887** lists the mapping between the S5735-S24P4X chassis and software versions.

**Table 4-1887** Version mapping

Series	Model	Software Version
S5735-S	S5735-S24P4X	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-664** S5735-S24P4X appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> </ul>
9	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1888](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1888** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1889](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1889** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1890](#).

**Table 4-1890** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 4-1891** describes the attributes of an ETH management port.

**Table 4-1891** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.



## Indicator Description

### NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
  - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
  - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 4-665 Indicators on the S5735-S24P4X

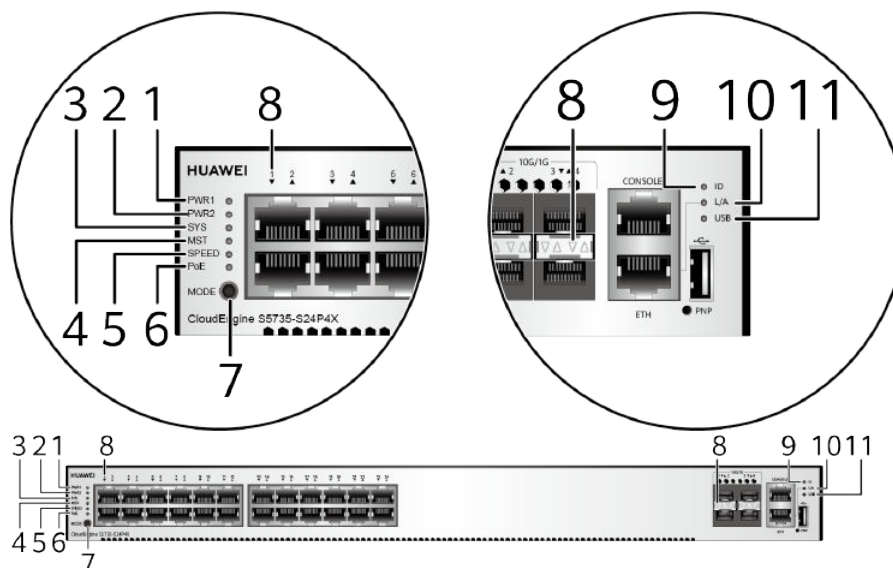


Table 4-1892 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.

No.	Indicator	Name	Color	Status	Description
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.

No.	Indicator	Name	Color	Status	Description
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-1893</a> and <a href="#">Table 4-1894</a> .		
9	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
10	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.

No.	Indicator	Name	Color	Status	Description
11	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-1893** Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).

Display Mode	Color	Status	Description
	Green and yellow	Blinking green and yellow alternately	<p>The port fails to supply power to a PD due to one of the following reasons:</p> <ul style="list-style-type: none"> <li>• The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.</li> <li>• The total power consumption of PDs has reached the maximum power of the switch.</li> <li>• The manual power management mode is used and the port is not enabled to provide power to the PD.</li> </ul>

**Table 4-1894** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	<p>The switch is not the master switch in a stack.</p> <ul style="list-style-type: none"> <li>• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>

Display Mode	Color	Status	Description
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 100M/1000M port: The port is operating at 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 100M/1000M port: The port is operating at 1000 Mbit/s. 1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.

## Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1895** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	-	874 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>



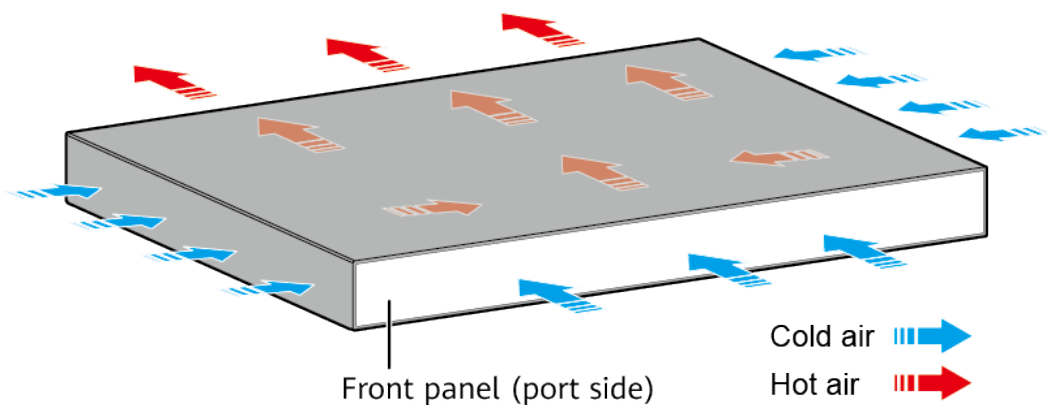
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (110 V)	–	779 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1600 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>

**NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

## Heat Dissipation

The S5735-S24P4X has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1896](#) lists technical specifications of the S5735-S24P4X.

**Table 4-1896** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	59.88 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)</li> </ul>
Weight (with packaging)	7.39 kg (16.29 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>• Not providing the PoE function: 65 W</li> <li>• 100% PoE loads: 847 W (PoE: 720 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	51 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p><b>NOTE</b></p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).                     The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.                     The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010940

### 4.36.3 S5735-S32ST4X

#### Version Mapping

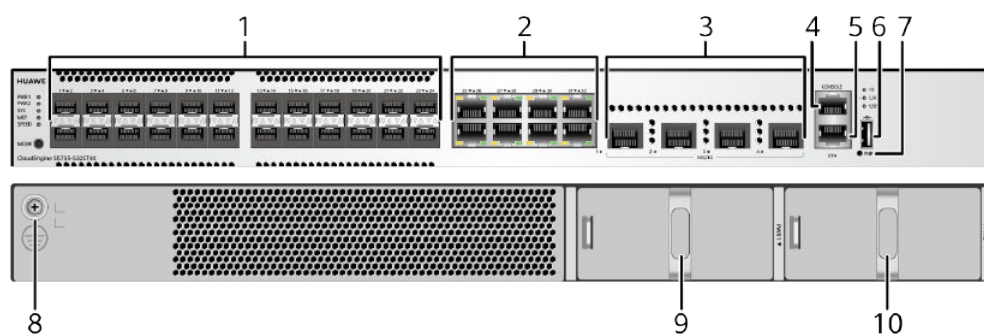
[Table 4-1897](#) lists the mapping between the S5735-S32ST4X chassis and software versions.

**Table 4-1897** Version mapping

Series	Model	Software Version
S5735-S	S5735-S32ST4X	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

#### Appearance and Structure

**Figure 4-666** S5735-S32ST4X appearance



1	<p>Twenty-four 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b> (maximum transmission distance ≤ 40 km)</li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>	2	Eight 10/100/1000BASE-T ports
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>	4	One console port
5	One ETH management port	6	One USB port
7	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	8	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>

9	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.11 PAC60S12-AR (60 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>	1 0	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.11 PAC60S12-AR (60 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>
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## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-1898](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-1898** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1899](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1899** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1900](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1900** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1901](#).

**Table 4-1901** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1902](#) describes the attributes of an ETH management port.

**Table 4-1902** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5735-S32ST4X has similar indicators to those on the S5735-S24P4X except that the S5735-S32ST4X does not have a PoE mode indicator. For details, see [Indicator Description](#).

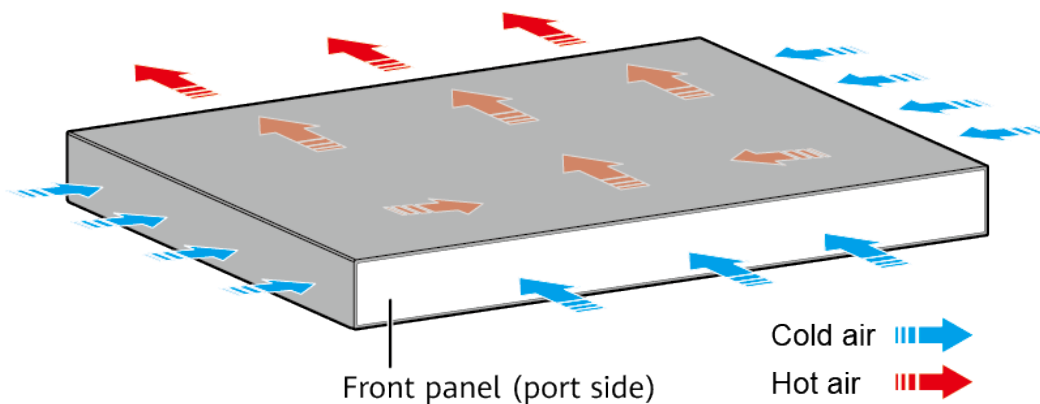
## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.



## Heat Dissipation

The S5735-S32ST4X has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1903](#) lists technical specifications of the S5735-S32ST4X.

**Table 4-1903** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	68.59 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>● Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>● Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)</li> </ul>
Weight (with packaging)	7.47 kg (16.47 lb)
Stack ports	Any 10/100/1000BASE-T ports, 100/1000BASE-X ports, or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>● AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>● High-Voltage DC input: 240 V DC</li> <li>● DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>● High-Voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	66 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>● Tested according to ATIS standard</li> <li>● EEE enabled</li> <li>● No PoE power consumption</li> </ul>	47 W

Item	Description
Operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 59.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010931

## 4.36.4 S5735-S48T4X

### Version Mapping

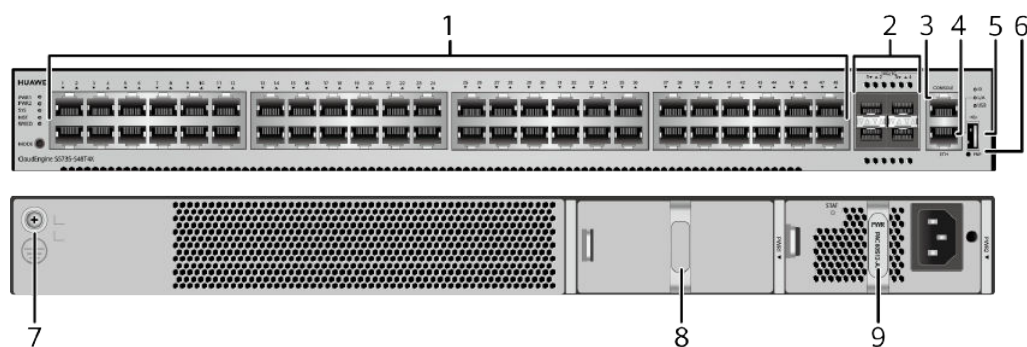
**Table 4-1904** lists the mapping between the S5735-S48T4X chassis and software versions.

**Table 4-1904** Version mapping

Series	Model	Software Version
S5735-S	S5735-S48T4X	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-667** S5735-S48T4X appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <b>ground cable</b>.</p>	8	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power module:</p> <ul style="list-style-type: none"> <li>• <b>5.11 PAC60S12-AR (60 W AC&amp;240 V DC Power Module)</b></li> <li>• <b>5.30 PDC1000S12-DB (1000 W DC Power Module)</b></li> <li>• <b>5.15 PDC180S12-CR (180 W DC Power Module)</b> (applicable in V200R020C00 and later versions)</li> </ul>

9	Power module slot 2  <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <a href="#">5.11 PAC60S12-AR (60 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>	-	-
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## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1905](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1905** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1906](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1906** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1907](#).

**Table 4-1907** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1908](#) describes the attributes of an ETH management port.

**Table 4-1908** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

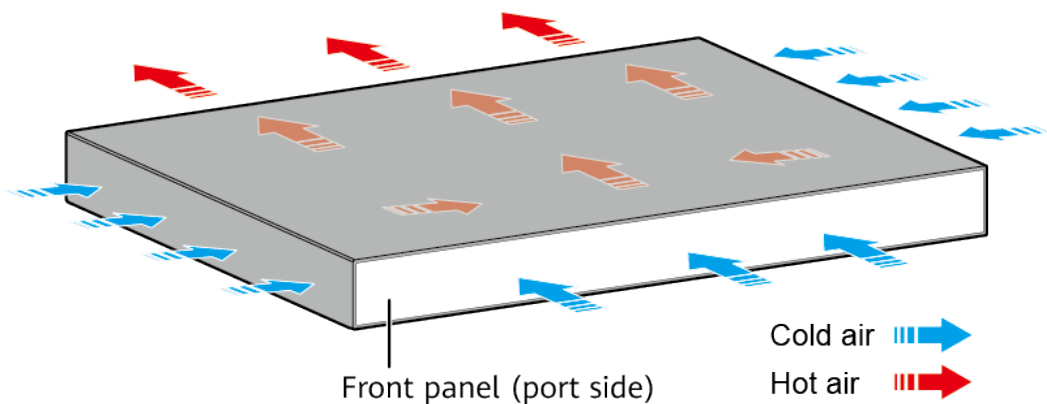
The S5735-S48T4X has similar indicators to those on the S5735-S24P4X except that the S5735-S48T4X does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation

The S5735-S48T4X has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



#### NOTE

This figure only shows the airflow direction and does not depict the actual device.



## Technical Specifications

**Table 4-1909** lists technical specifications of the S5735-S48T4X.

**Table 4-1909** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	74.7 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)</li> </ul>
Weight (with packaging)	7.69 kg (16.95 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>

Item	Description
Maximum voltage range	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>● High-Voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	59 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>● Tested according to ATIS standard</li> <li>● EEE enabled</li> <li>● No PoE power consumption</li> </ul>	40 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> <li>● The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>● The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>● The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.

Item	Description
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010941

### 4.36.5 S5735-S48P4X

#### Version Mapping

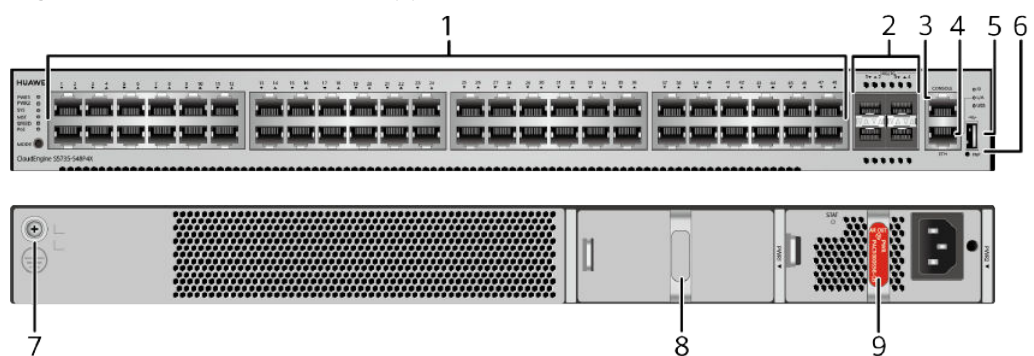
**Table 4-1910** lists the mapping between the S5735-S48P4X chassis and software versions.

**Table 4-1910** Version mapping

Series	Model	Software Version
S5735-S	S5735-S48P4X	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

#### Appearance and Structure

**Figure 4-668** S5735-S48P4X appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"><li>• <b>GE optical module</b></li><li>• <b>GE-CWDM optical module</b></li><li>• <b>GE-DWDM optical module</b></li><li>• <b>GE copper module (100M/1000M auto-sensing)</b></li><li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li><li>• <b>10GE-CWDM optical module</b></li><li>• <b>10GE-DWDM optical module</b></li><li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li><li>• <b>3 m and 10 m SFP+ AOC cables</b></li><li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li></ul>
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> </ul>
9	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1911](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1911** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1912](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1912** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1913](#).

**Table 4-1913** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1914](#) describes the attributes of an ETH management port.

**Table 4-1914** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5735-S48P4X has the same types of indicators as the S5735-S24P4X. For details, see [Indicator Description](#).

## Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1915** Power supply configurations

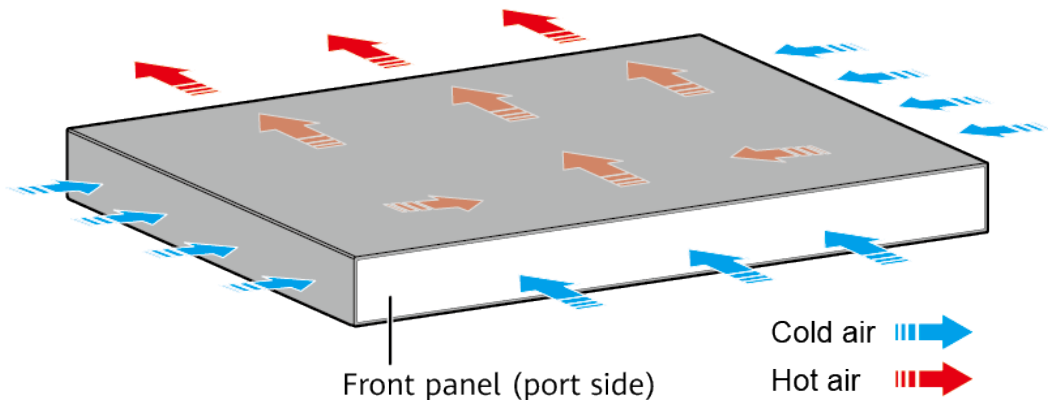
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	-	874 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 29</li> </ul>
1000 W AC (110 V) 1000 W DC	-	779 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 25</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>

### NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

## Heat Dissipation

The S5735-S48P4X has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.





 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1916](#) lists technical specifications of the S5735-S48P4X.

**Table 4-1916** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	54.88 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)</li> </ul>
Weight (with packaging)	7.64 kg (16.84 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Supported

Item	Description
Rated voltage range	<ul style="list-style-type: none"> <li>● AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>● High-Voltage DC input: 240 V DC</li> <li>● DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>● High-Voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>● Not providing the PoE function: 77 W</li> <li>● 100% PoE loads: 1661 W (PoE: 1440 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>● Tested according to ATIS standard</li> <li>● EEE enabled</li> <li>● No PoE power consumption</li> </ul>	59 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"><li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li><li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li><li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li></ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	98010943

## 4.36.6 S5735-S48S4X

### Version Mapping

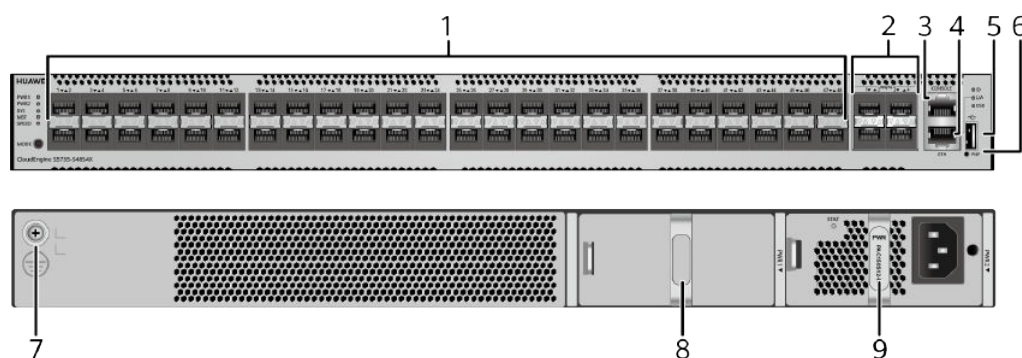
[Table 4-1917](#) lists the mapping between the S5735-S48S4X chassis and software versions.

**Table 4-1917** Version mapping

Series	Model	Software Version
S5735-S	S5735-S48S4X	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-669** S5735-S48S4X appearance



1	Forty-eight 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port

5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Power module slot 1 <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>
9	Power module slot 2 <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>	-	-

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-1918](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-1918** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z

Attribute	Description
Working mode	100/1000 Mbit/s auto-sensing

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1919](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1919** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1920](#).

**Table 4-1920** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or

remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1921](#) describes the attributes of an ETH management port.

**Table 4-1921** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

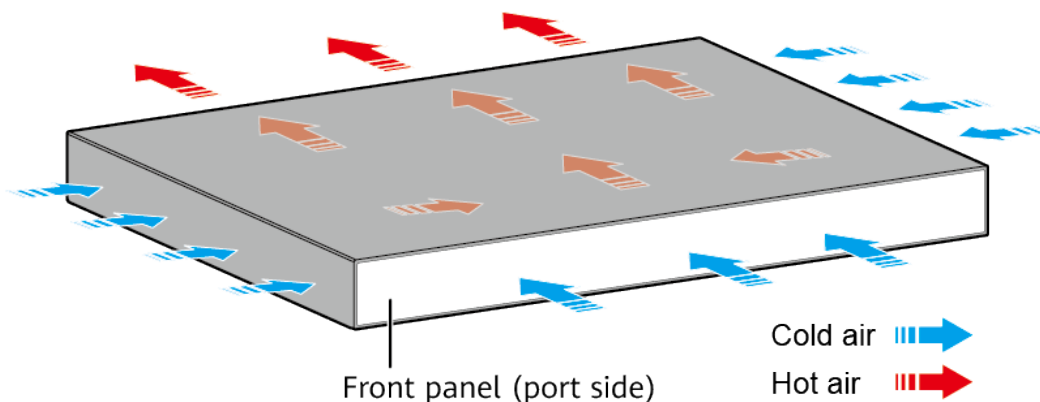
The S5735-S48S4X has similar indicators to those on the S5735-S24P4X except that the S5735-S48S4X does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation

The S5735-S48S4X has three built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1922](#) lists technical specifications of the S5735-S48S4X.

**Table 4-1922** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	66.33 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	NA
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>



Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>• Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)</li> </ul>
Weight (with packaging)	8.27 kg (18.23 lb)
Stack ports	Any 100/1000BASE-X ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>• DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>• AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>• DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	89 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	67 W
Operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 61 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010947

## 4.37 S5735-S-I

### 4.37.1 S5735-S4T2X-IA150G1

## Version Mapping

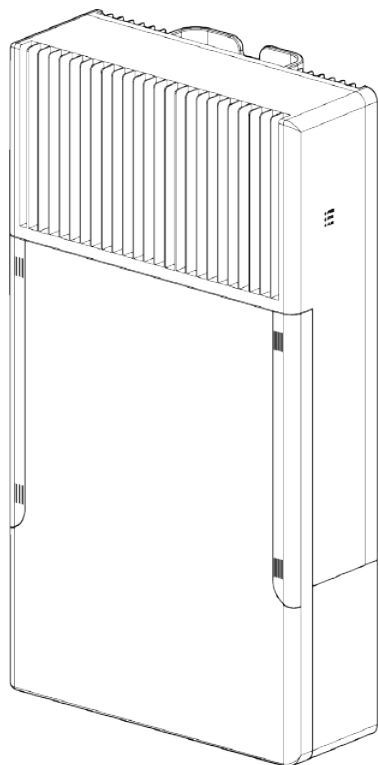
**Table 4-1923** lists the mapping between the S5735-S4T2X-IA150G1 chassis and software versions.

**Table 4-1923** Version mapping

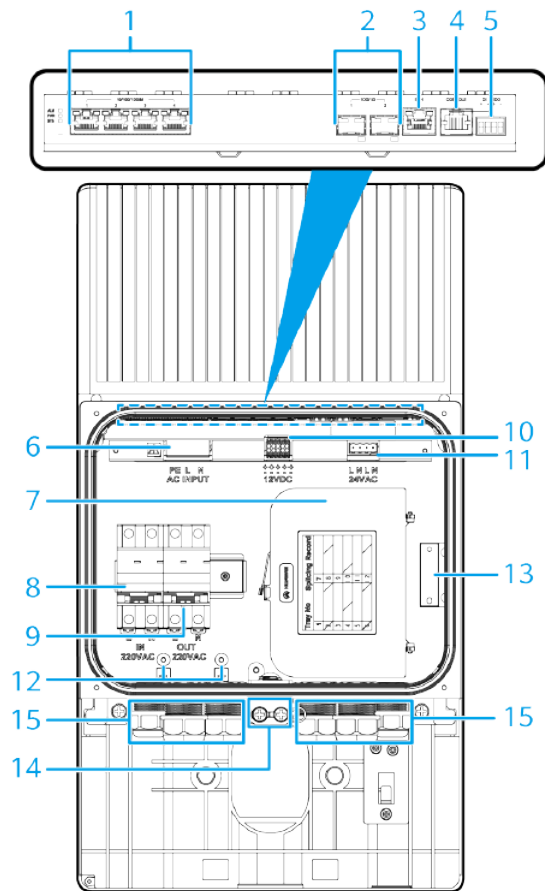
Series	Model	Software Version
S5735-S-I	S5735-S4T2X-IA150G1	V200R019C10 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-670** S5735-S4T2X-IA150G1 appearance



**Figure 4-671** Interior of the S5735-S4T2X-IA150G1 maintenance compartment



1	Four 10/100/1000BASE-T ports	2 Two 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>Industrial optical module</b></li> <li>• <b>GPON optical module</b></li> <li>• Third-party GPON optical modules (Hisense LTE3415-SH+ and CIG G-97S)</li> </ul> <b>NOTE</b> If one port uses a GPON optical module, the other port cannot be used at the same time.
3	One ETH management port	4 One console port

5	<p><b>Monitoring port</b></p> <ul style="list-style-type: none"> <li>• DI: signal input line, which connects to a door status sensor.</li> <li>• DO: signal output line, which connects to a camera alarm signal cable.</li> </ul> <p><b>NOTE</b></p> <p>The monitoring port can be used to detect the status of a connected external device, such as the opening and closing of the maintenance compartment door.</p> <p>The monitoring port is used with a conductive cable. The minimum cross-sectional area of the conductor connected to a conductive cable is 0.3 mm<sup>2</sup> or 22 AWG, and the maximum cross-sectional area of the conductor is 1.3 mm<sup>2</sup> or 16 AWG.</p> <p>For details about how to use a monitoring port, see "Monitoring Interface Configuration" in the <i>Configuration Guide - Device Management Configuration</i>.</p>	6	<p>220 V AC power input socket</p>
7	<p><b>Fiber management tray (FMT)</b></p> <p><b>NOTE</b></p> <p>The FMT is optional.</p>	8	<p>220 V AC power input circuit breaker</p> <p><b>NOTICE</b></p> <p>This circuit breaker is optional.</p> <p>Connect an external power cable to the 220 V AC power input circuit breaker when it is in use.</p> <p>An external power cable needs to be prepared onsite. Ensure that the wires of the external cable are correctly connected to the L and N sockets of a plug.</p> <p>The circuit breaker supports a maximum of 32 A input current and provides two 220 V AC outputs.</p> <ul style="list-style-type: none"> <li>• One output is connected to the AC power input socket of the switch to supply power to the switch.</li> <li>• The other output is connected to the 220 V AC power output circuit breaker of the switch to supply power to connected PDs (such as strobe lights and non-PoE PTZ dome cameras).</li> </ul>

9	<p>220 V AC power output circuit breaker</p> <p><b>NOTICE</b></p> <p>This circuit breaker is optional.</p> <p>The 220 V AC power output circuit breaker provides overcurrent protection only, and is only used for external power conversion. It supports a maximum of 10 A output current.</p> <p>The connected external devices need to provide certain surge protection capabilities. It is recommended that the surge protection capabilities for both differential and common modes be 20 kA.</p>	10	<p>12 V DC power output socket</p> <p><b>NOTE</b></p> <p>The switch provides five 12 V DC outputs to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p>
11	<p>24 V AC power output socket</p> <p><b>NOTE</b></p> <p>The switch provides two 24 V AC outputs to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p>	12	<p>PE cable ground terminal</p> <p><b>NOTE</b></p> <p>It is used to ground a PE power cable for 220 V AC input or output.</p>
13	<p>Door status sensor</p> <p><b>NOTE</b></p> <p>It reports an alarm when the maintenance compartment door of the switch is opened.</p>	14	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used to ground the switch. The ground cable needs to be purchased separately.</p>
15	<p>Cable outlet</p>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1924](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1924** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1925](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1925** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1926](#).

**Table 4-1926** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

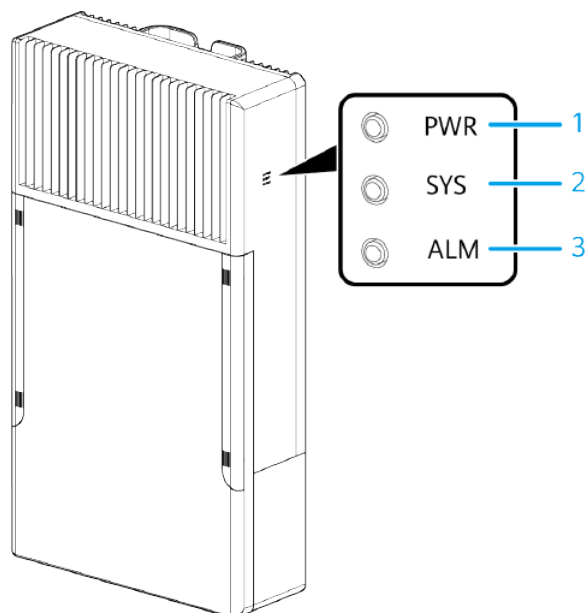
You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 4-1927** describes the attributes of an ETH management port.

**Table 4-1927** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

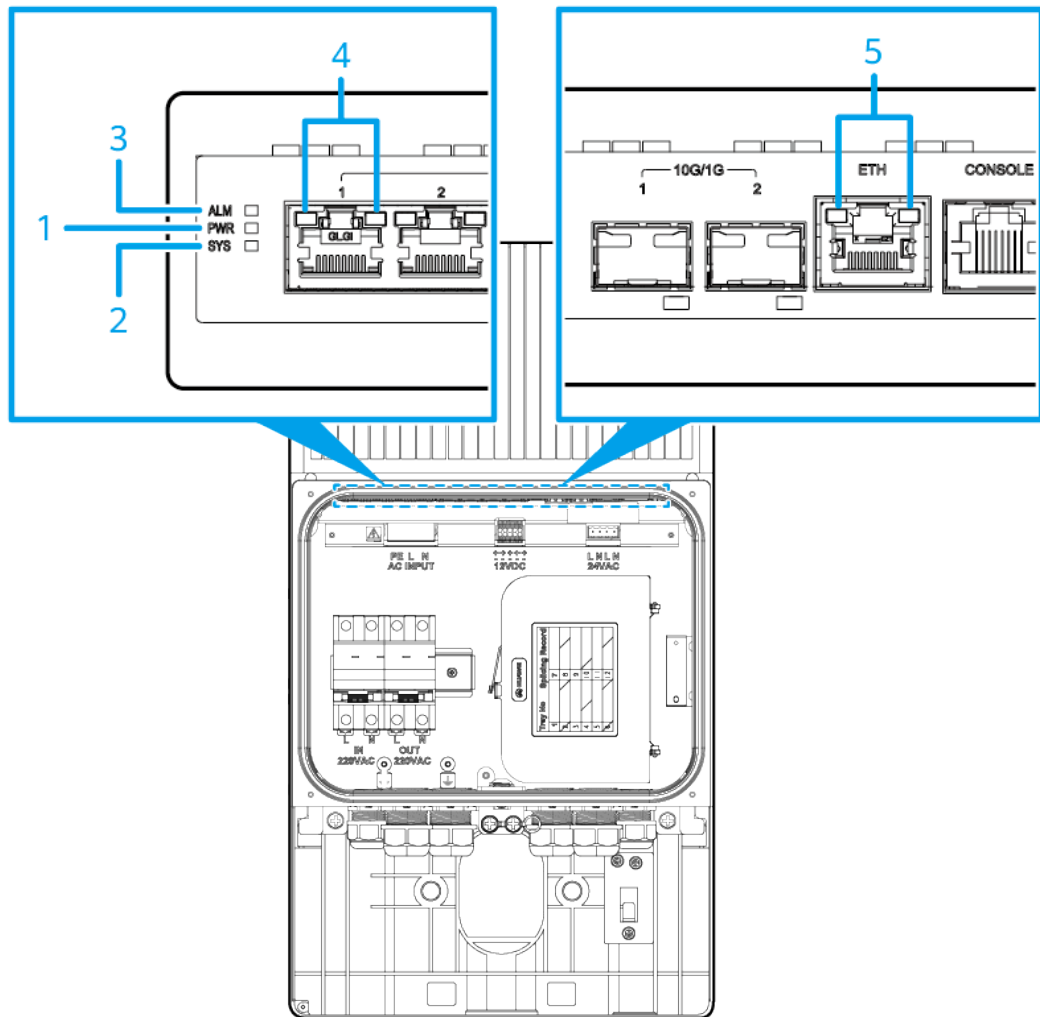
## Indicator Description

**Figure 4-672** Indicators on the outside of the S5735-S4T2X-IA150G1





**Figure 4-673** Indicators inside the maintenance compartment of the S5735-S4T2X-IA150G1



**Table 4-1928** Description of indicators

No.	Indicator	Name	Color	Status	Description
1	PWR	Power indicator	-	Steady off	The switch is powered off.
			Green	Steady on	The switch is powered on and can communicate with the built-in power module properly.
			Yellow	Steady on	The switch is powered on but cannot communicate with the built-in power module properly.
2	SYS	System status indicator	-	Steady off	The system is not running.

No.	Indicator	Name	Color	Status	Description
			Green	Fast blinking	The system is starting.
			Green	Steady on	In the system startup preparation phase, the SYS indicator is steady green for no more than 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a temperature alarm has been generated.
			Red	Fast blinking	The indicator identifies the switch to maintain. The indicator can be turned on or off remotely to help field engineers find the switch to maintain.
3	ALM	Alarm indicator	-	Steady off	There is no AC input or power supply is normal.
			Red	Steady on	The power supply to the switch is abnormal.
4	-	Service port indicator (electrical ports)	-	Steady off	The port is not connected or has been shut down.
			Green and yellow	Steady on	The port is connected.
			Green and yellow	Blinking	The port is sending or receiving data.
		Service port indicator (optical ports)	-	Steady off	The port is not connected or has been shut down.
			Green	Steady on	The port is connected.
			Green	Blinking	The port is sending or receiving data.
5	-	ETH port indicator	-	Steady off	The ETH port is not connected.
			Green and yellow	Steady on	The ETH port is connected.

No.	Indicator	Name	Color	Status	Description
			Green and yellow	Blinking	The port is sending or receiving data.

## Power Supply Configuration

The S5735-S4T2X-IA150G1 has a built-in power module and does not support pluggable power modules. The S5735-S4T2X-IA150G1 can be directly connected to an external 220 V AC power supply and provide power for external devices. [Table 4-1929](#) lists the power supply configurations of the S5735-S4T2X-IA150G1.

**Table 4-1929** Power supply configurations

Power Supply Mode	Available Power
12 V DC	Five 12 V DC outputs provide a total of 72 W power. The maximum power of a single output is 72 W.
24 V AC	Two 24 V AC outputs provide a total of 72 W power. The maximum power of a single output is 72 W.

### NOTE

The five 12 V DC outputs and two 24 V AC outputs provides a combined total power output of 144 W.

## Heat Dissipation

The S5735-S4T2X-IA150G1 has no fans and uses natural heat dissipation.

## Technical Specifications

[Table 4-1930](#) lists technical specifications of the S5735-S4T2X-IA150G1.

**Table 4-1930** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	57.28 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±1.5 kV in differential mode, ±6 kV in common mode
Power supply surge protection	Surge current: <ul style="list-style-type: none"><li>• AC input: 20 kA</li></ul> Surge: <ul style="list-style-type: none"><li>• AC input: ±6 kV in differential mode; ±6 kV in common mode</li><li>• 12 V DC output: ±2 kV in differential mode; ±4 kV in common mode</li><li>• 24 V AC output: ±2 kV in differential mode; ±6 kV in common mode</li></ul>
Dimensions (H x W x D)	550 mm x 300 mm x 135 mm (21.65 in. x 11.81 in. x 5.31 in.)
Weight (including packaging)	12.2 kg (26.9 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	220 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	176 V AC to 264 V AC, 45 Hz to 66 Hz
Maximum power consumption (100% throughput)	29 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	28 W
Operating temperature	-40°C to +75°C (-40°F to 167°F) <b>NOTE</b> -25°C to +75°C (-13°F to +167°F): sun shield needed; 400 LFM air velocity (minimum); GPON optical modules not supported -25°C to +70°C (-13°F to +158°F): sun shield needed; 200 LFM air velocity (minimum); GPON optical modules supported -30°C to +60°C (-22°F to +140°F): sun shield needed; 40 LFM air velocity (minimum); GPON optical modules supported -35°C to +55°C (-31°F to +131°F): sun shield needed; no requirement on the air velocity; GPON optical modules supported -35°C to +45°C (-31°F to +113°F): 1120 W/m <sup>2</sup> solar radiation (maximum); no requirement on the air velocity -40°C to -35°C (-40°F to -31°F): stable port performance can be achieved only when at least four Ethernet electrical ports go Up When the altitude is 1800-4000 m (5906-13123 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +85°C (-40°F to +185°F)
IP rating	IP55
Salt spray protection	Supported, allowing the switch to be installed in areas more than 500 meters away from the sea
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-4000 m (0-13123 ft.)
Product certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>

Item	Description
Part number	02312NTA

## 4.37.2 S5735-S8P2X-IA200G1

### Version Mapping

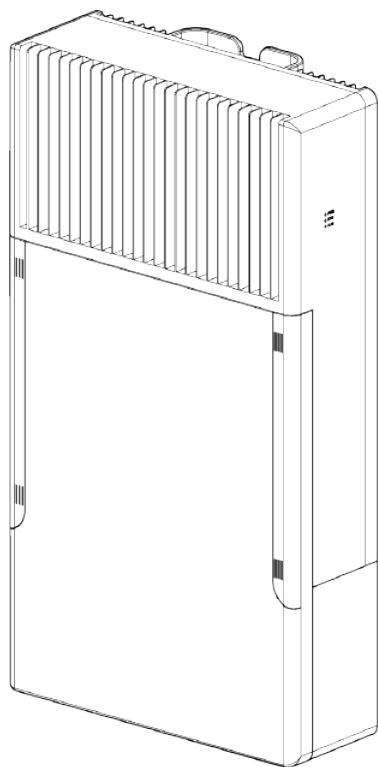
**Table 4-1931** lists the mapping between the S5735-S8P2X-IA200G1 chassis and software versions.

**Table 4-1931** Version mapping

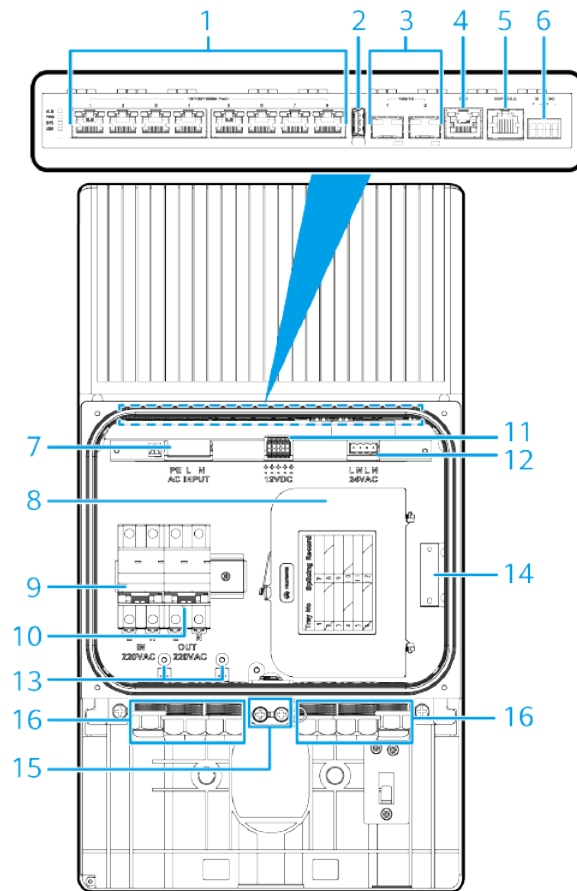
Series	Model	Software Version
S5735-S-I	S5735-S8P2X-IA200G1	V200R019C10 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-674** S5735-S8P2X-IA200G1 appearance



**Figure 4-675** Interior of the S5735-S8P2X-IA200G1 maintenance compartment



1	Eight PoE+ 10/100/1000BASE-T ports	2	One USB port
3	Two 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>● <b>Industrial optical module</b></li> <li>● <b>GPON optical module</b></li> <li>● Third-party GPON optical modules (Hisense LTE3415-SH+ and CIG G-97S)</li> </ul> <b>NOTE</b> If one port uses a GPON optical module, the other port cannot be used at the same time.	4	One ETH management port

5	One console port	6	<p>Monitoring port</p> <ul style="list-style-type: none"> <li>• DI: signal input line, which connects to a door status sensor.</li> <li>• DO: signal output line, which connects to a camera alarm signal cable.</li> </ul> <p><b>NOTE</b></p> <p>The monitoring port can be used to detect the status of a connected external device, such as the opening and closing of the maintenance compartment door.</p> <p>The monitoring port is used with a conductive cable. The minimum cross-sectional area of the conductor connected to a conductive cable is 0.3 mm<sup>2</sup> or 22 AWG, and the maximum cross-sectional area of the conductor is 1.3 mm<sup>2</sup> or 16 AWG.</p> <p>For details about how to use a monitoring port, see "Monitoring Interface Configuration" in the <i>Configuration Guide - Device Management Configuration</i>.</p>
7	220 V AC power input socket	8	<p>Fiber management tray (FMT)</p> <p><b>NOTE</b></p> <p>The FMT is optional.</p>



9	<p>220 V AC power input circuit breaker</p> <p><b>NOTICE</b></p> <p>This circuit breaker is optional.</p> <p>Connect an external power cable to the 220 V AC power input circuit breaker when it is in use.</p> <p>An external power cable needs to be prepared onsite. Ensure that the wires of the external cable are correctly connected to the L and N sockets of a plug.</p> <p>The circuit breaker supports a maximum of 32 A input current and provides two 220 V AC outputs.</p> <ul style="list-style-type: none"> <li>• One output is connected to the AC power input socket of the switch to supply power to the switch.</li> <li>• The other output is connected to the 220 V AC power output circuit breaker of the switch to supply power to connected PDs (such as strobe lights and non-PoE PTZ dome cameras).</li> </ul>	10	<p>220 V AC power output circuit breaker</p> <p><b>NOTICE</b></p> <p>This circuit breaker is optional.</p> <p>The 220 V AC power output circuit breaker provides overcurrent protection only, and is only used for external power conversion. It supports a maximum of 10 A output current.</p> <p>The connected external devices need to provide certain surge protection capabilities. It is recommended that the surge protection capabilities for both differential and common modes be 20 kA.</p>
11	<p>12 V DC power output socket</p> <p><b>NOTE</b></p> <p>The switch provides five 12 V DC outputs to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p>	12	<p>24 V AC power output socket</p> <p><b>NOTE</b></p> <p>The switch provides two 24 V AC outputs to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p>
13	<p>PE cable ground terminal</p> <p><b>NOTE</b></p> <p>It is used to ground a PE power cable for 220 V AC input or output.</p>	14	<p>Door status sensor</p> <p><b>NOTE</b></p> <p>It reports an alarm when the maintenance compartment door of the switch is opened.</p>
15	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used to ground the switch. The ground cable needs to be purchased separately.</p>	16	<p>Cable outlet</p>

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1932](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1932** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1933](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1933** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1934](#).

**Table 4-1934** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1935](#) describes the attributes of an ETH management port.

**Table 4-1935** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

### USB port

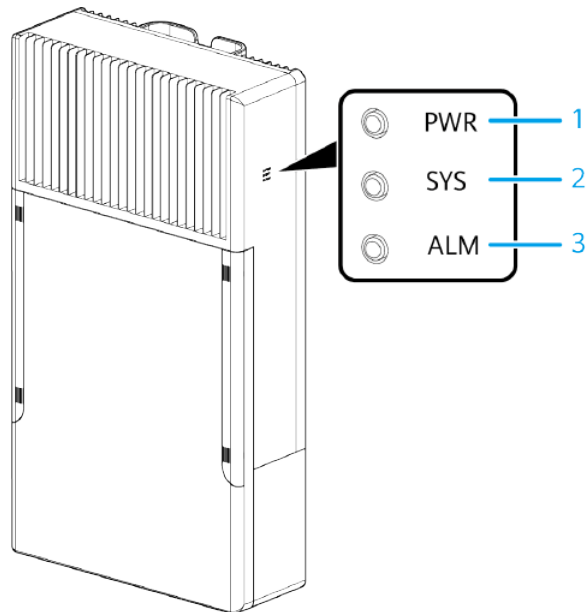
The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

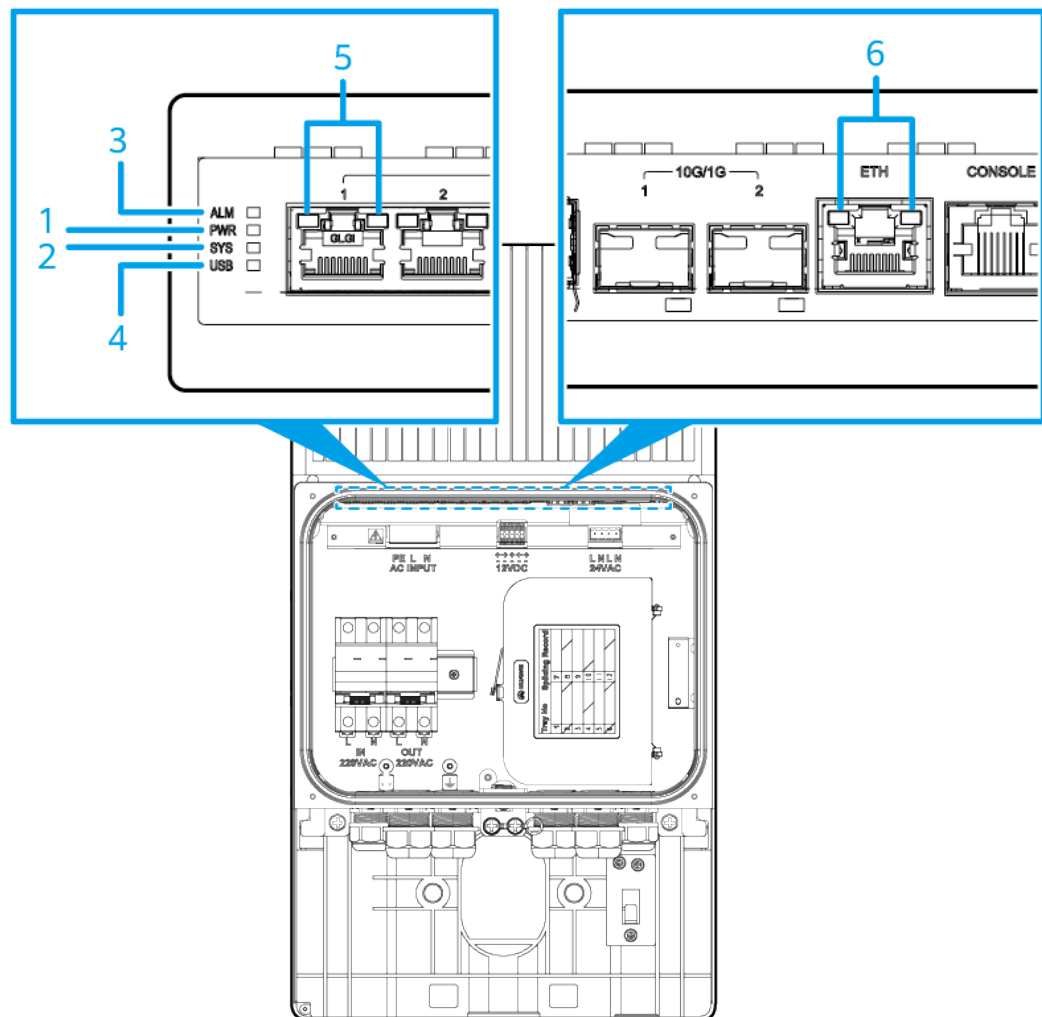
USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

**Figure 4-676** Indicators on the outside of the S5735-S8P2X-IA200G1



**Figure 4-677** Indicators inside the maintenance compartment of the S5735-S8P2X-IA200G1



**Table 4-1936** Description of indicators

No.	Indicator	Name	Color	Status	Description
1	PWR	Power indicator	-	Steady off	The switch is powered off.
			Green	Steady on	The switch is powered on and can communicate with the built-in power module properly.
			Yellow	Steady on	The switch is powered on but cannot communicate with the built-in power module properly.
2	SYS	System status indicator	-	Steady off	The system is not running.

No.	Indicator	Name	Color	Status	Description
			Green	Fast blinking	The system is starting.
			Green	Steady on	In the system startup preparation phase, the SYS indicator is steady green for no more than 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a temperature alarm has been generated.
			Red	Fast blinking	The indicator identifies the switch to maintain. The indicator can be turned on or off remotely to help field engineers find the switch to maintain.
3	ALM	Alarm indicator	-	Steady off	There is no AC input or power supply is normal.
			Red	Steady on	The power supply to the switch is abnormal.
4	USB	USB-based deployment indicator	-	Steady off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.

No.	Indicator	Name	Color	Status	Description
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.
5	-	Service port indicator	Green	Steady off	The port is not connected or has been shut down.
				Steady on	The port is connected.
				Blinking	The port is sending or receiving data.
			Yellow	Steady off	The port does not supply power to any PD.
				Steady on	The port is supplying power to the connected PD.
				Blinking	The PD connected to the port is not a standard PD or its power exceeds the maximum power or power threshold of the port.
6	-	ETH port indicator	-	Steady off	The ETH port is not connected.
			Green and yellow	Steady on	The ETH port is connected.
			Green and yellow	Blinking	The port is sending or receiving data.

## Power Supply Configuration

The S5735-S8P2X-IA200G1 has a built-in power module and does not support pluggable power modules. The S5735-S8P2X-IA200G1 can be directly connected to an external 220 V AC power supply and provide power for external devices. [Table 4-1937](#) lists the power supply configurations of the S5735-S8P2X-IA200G1.

**Table 4-1937** Power supply configurations

Power Supply Mode	Available Power
PoE	160 W Maximum number of PoE ports (fully loaded): <ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 8</li> <li>802.3at (30 W per port): 5</li> </ul>
12 V DC	Five 12 V DC outputs provide a total of 72 W power. The maximum power of a single output is 72 W.
24 V AC	Two 24 V AC outputs provide a total of 72 W power. The maximum power of a single output is 72 W.

 **NOTE**

The total maximum output power of PoE power output, five 12 V DC outputs, and two 24 V AC outputs is 160 W.

In the following scenarios, a device can supply up to 150 W available power.

- PoE-only scenario: If a device that is supplying more than 150 W PoE power is restarted upon power-off or is reset, the device can only supply up to 150 W available power due to load fluctuation errors.
- Hybrid power supply scenario: When a device uses both PoE and 12 V/24 V power supplies, and the device is powered on with loads, is restarted upon power-off, or is reset, the device can only supply up to 150 W power due to load fluctuation errors.

## Heat Dissipation

The S5735-S8P2X-IA200G1 has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1938** lists technical specifications of the S5735-S8P2X-IA200G1.

**Table 4-1938** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	57.28 years
Mean time to repair (MTTR)	2 hours



Item	Description
Availability	> 0.99999
Service port surge protection	±1.5 kV in differential mode, ±6 kV in common mode
Power supply surge protection	Surge current: <ul style="list-style-type: none"> <li>AC input: 20 kA</li> </ul> Surge: <ul style="list-style-type: none"> <li>AC input: ±6 kV in differential mode; ±6 kV in common mode</li> <li>12 V DC output: ±2 kV in differential mode; ±4 kV in common mode</li> <li>24 V AC output: ±2 kV in differential mode; ±6 kV in common mode</li> </ul>
Dimensions (H x W x D)	550 mm x 300 mm x 135 mm (21.65 in. x 11.81 in. x 5.31 in.)
Weight (including packaging)	12.2 kg (26.9 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	220 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	176 V AC to 264 V AC, 45 Hz to 66 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none"> <li>With no output power: 34 W</li> <li>With output power: 209 W (device power consumption: 49 W; output power: 160 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	31 W

Item	Description
Operating temperature	<p>-40°C to +75°C (-40°F to 167°F)</p> <p><b>NOTE</b></p> <p>-25°C to +75°C (-13°F to +167°F): sun shield needed; 400 LFM air velocity (minimum); GPON optical modules not supported</p> <p>-25°C to +70°C (-13°F to +158°F): sun shield needed; 200 LFM air velocity (minimum); GPON optical modules supported</p> <p>-30°C to +60°C (-22°F to +140°F): sun shield needed; 40 LFM air velocity (minimum); GPON optical modules supported</p> <p>-35°C to +55°C (-31°F to +131°F): sun shield needed; no requirement on the air velocity; GPON optical modules supported</p> <p>-35°C to +45°C (-31°F to +113°F): 1120 W/m<sup>2</sup> solar radiation (maximum); no requirement on the air velocity</p> <p>-40°C to -35°C (-40°F to -31°F): stable port performance can be achieved only when at least four Ethernet electrical ports go Up</p> <p>When the altitude is 1800–4000 m (5906–13123 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Storage temperature	-40°C to +85°C (-40°F to +185°F)
IP rating	IP55
Salt spray protection	Supported, allowing the switch to be installed in areas more than 500 meters away from the sea
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0–4000 m (0–13123 ft.)
Product certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	02312NTA-001

### 4.37.3 S5735-S8P2X-IA200H1

## Overview

**Table 4-1939** Basic information about the S5735-S8P2X-IA200H1

Item	Details
Description	Function Module, S5735-S8P2X-IA200H1, Single-Phase Or Dual-Live Wire Or PV Input, PoE 53Vdc/3.8A, 12Vdc/6A, 24Vac/4A, Natural Heat Dissipation
Part Number	02313CMQ
Model	S5735-S8P2X-IA200H1
First supported version	V200R020C10
Remarks	<p>External power supply capability:</p> <p>When only AC input is used:</p> <p>Maximum output power: 300 W (AC input range: 100 V AC to 120 V AC)</p> <p>Maximum output power: 450 W (AC input range: 200 V AC to 240 V AC)</p> <p>When only PV input is used:</p> <p>Maximum output power: 500 W (DC input range: 36 V DC to 58 V DC)</p> <p>Maximum output power: 1400 W (DC input range: 58 V DC to 72 V DC)</p> <p>Maximum output power: 1000 W (DC input range: 72 V DC to 120 V DC)</p> <p>When PV and AC power inputs are included:</p> <p>Maximum output power: 1400 W</p> <p>When lithium batteries are used, the lithium battery charging capability is the maximum output power minus the power consumption (including 12 V DC, 24 V AC, PoE, and device power consumption).</p>

## Components

Figure 4-678 S5735-S8P2X-IA200H1 appearance

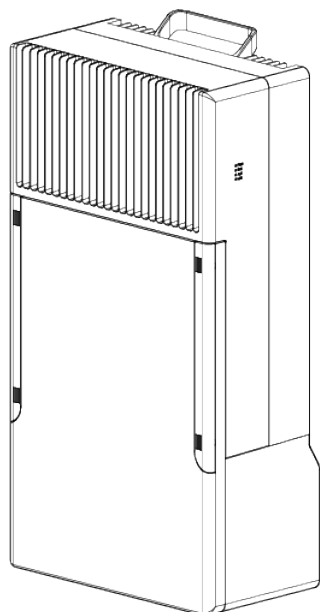
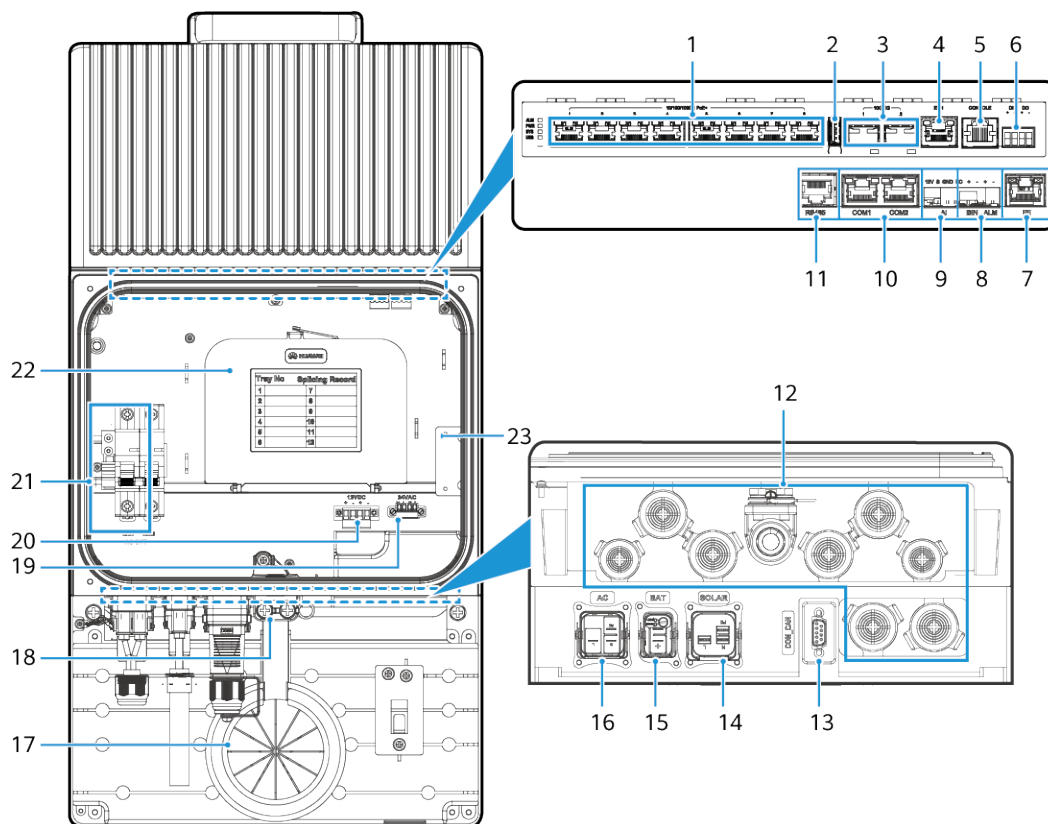


Figure 4-679 Interior of the S5735-S8P2X-IA200H1 maintenance compartment

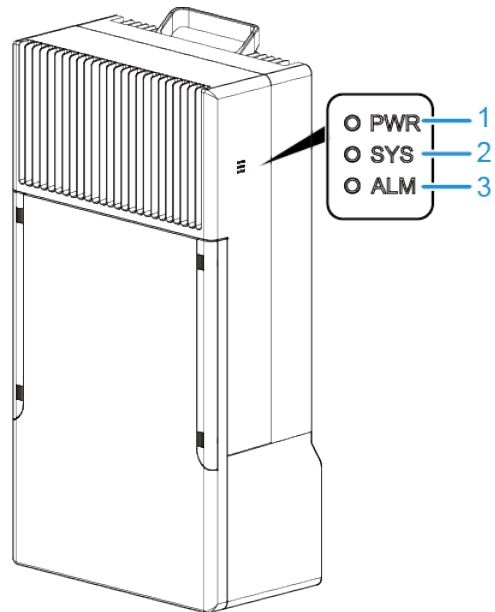


1	Eight 10/100/1000BASE-T PoE+ ports	2	One USB port
3	Two 10GE SFP+ ports	4	One ETH management port
5	One console port	6	<p>DI/DO monitoring port</p> <ul style="list-style-type: none"> <li>• DI: signal input line, which connects to a door status sensor.</li> <li>• DO: signal output line, which connects to a camera alarm signal cable.</li> </ul> <p><b>NOTE</b></p> <p>The monitoring port can be used to detect the status of a connected external device, such as the opening and closing of the maintenance compartment door.</p> <p>The monitoring port is used with a conductive cable. The minimum cross-sectional area of the conductor connected to a conductive cable is 0.3 mm<sup>2</sup> or 22 AWG, and the maximum cross-sectional area of the conductor is 1.3 mm<sup>2</sup> or 16 AWG.</p> <p>For details about how to use a monitoring port, see "Monitoring Interface Configuration" in the <i>Configuration Guide - Device Management Configuration</i>.</p>
7	<p>FE communication port</p> <p><b>NOTE</b></p> <p>The FE communication port is used for power commissioning.</p> <ul style="list-style-type: none"> <li>• 10 M/100 M autonegotiation, RJ45 port</li> <li>• Communication protocol: NetEco BIN</li> </ul>	8	Monitoring port (reserved)
9	Temperature sensor port (reserved)	10	COM1 and COM2 ports (reserved)
11	<p>RS485 port</p> <p><b>NOTE</b></p> <p>The RS485 port is used to communicate with a PC for commissioning the power locally.</p> <ul style="list-style-type: none"> <li>• Baud rate: 9600 bit/s by default</li> <li>• Communication protocol: Modbus</li> </ul>	12	Cable outlet

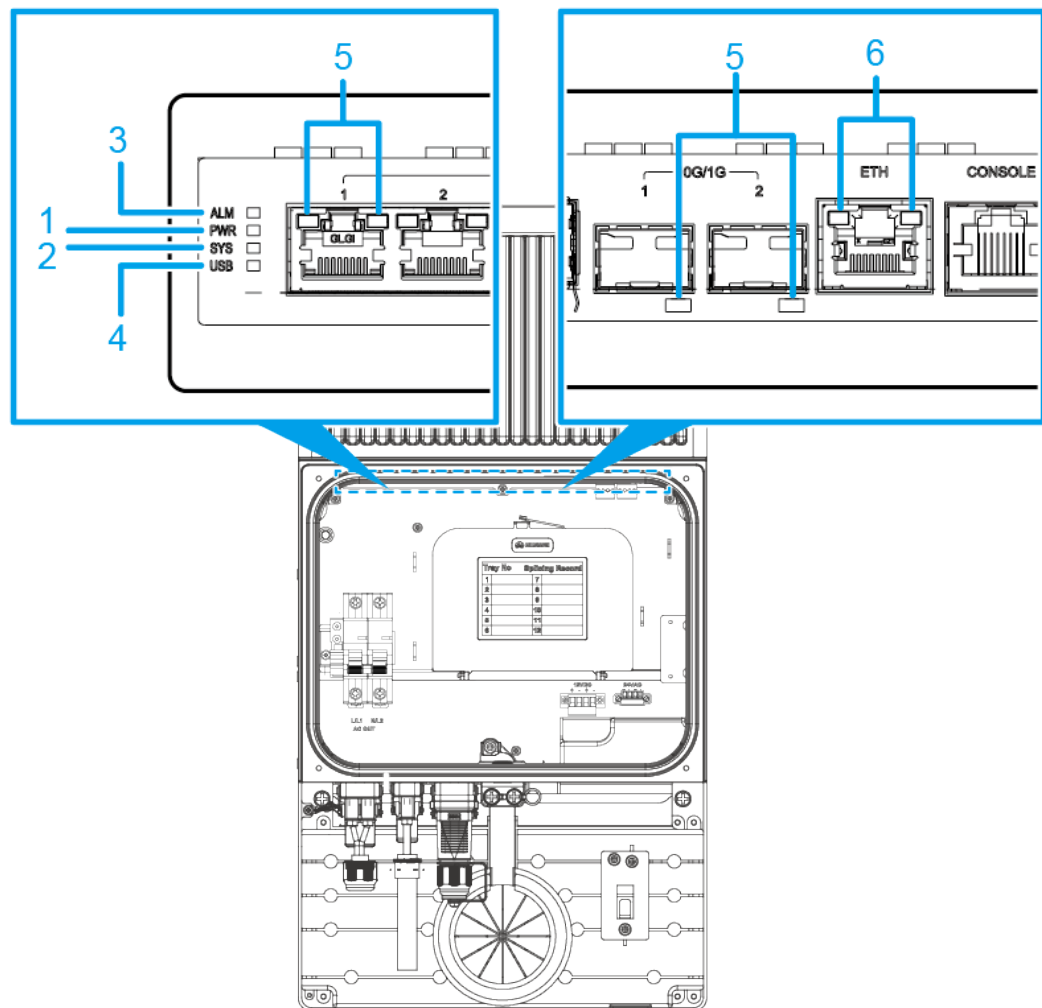
1 3	<p>COM_CAN port</p> <p><b>NOTE</b></p> <p>This port can be connected to lithium batteries to monitor and manage the batteries.</p> <ul style="list-style-type: none"> <li>• Baud rate: 125 kbit/s</li> <li>• Communication protocol: CAN</li> </ul>	1 4	<p>Photovoltaics (PV) input port</p> <p><b>NOTE</b></p> <p>This port can be connected to an external PV system to supply power to the switch.</p>
1 5	<p>BAT port</p> <p><b>NOTE</b></p> <p>This port can be connected to an external lithium battery to supply power to the switch or charge the lithium battery.</p>	1 6	<p>220 V AC power input socket</p>
1 7	<p>Cable outlet</p>	1 8	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used to ground the switch.</p>
1 9	<p>24 V AC power output socket</p> <p><b>NOTE</b></p> <p>The switch provides two 24 V AC outputs to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p>	2 0	<p>12 V DC power output socket</p> <p><b>NOTE</b></p> <p>The switch provides two 12 V DC outputs to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p>
2 1	<p>220 V AC power output circuit breaker</p> <p><b>NOTICE</b></p> <p>One 220 V AC power output is provided.</p> <p>The 220 V AC power output circuit breaker provides only overcurrent protection.</p> <p>The connected external devices need to provide certain surge protection capabilities. It is recommended that the surge protection capabilities for both differential and common modes be 20 kA.</p>	2 2	<p>Fiber management tray (FMT)</p>
2 3	<p>Door status sensor</p> <p><b>NOTE</b></p> <p>It reports an alarm when the maintenance compartment door of the switch is opened.</p>	-	-

## Indicators Description

**Figure 4-680** Indicators on the outside of the S5735-S8P2X-IA200H1



**Figure 4-681** Indicators inside the maintenance compartment of the S5735-S8P2X-IA200H1



**Table 4-1940** Description of indicators

No.	Indicator	Name	Color	Status	Description
1	PWR	Power indicator	-	Steady off	The switch is powered off.
			Green	Steady on	The switch is powered on and can communicate with the built-in power module properly.
			Yellow	Steady on	The switch is powered on but cannot communicate with the built-in power module properly.
2	SYS	System status indicator	-	Steady off	The system is not running.



No.	Indicator	Name	Color	Status	Description
			Green	Fast blinking	The system is starting.
			Green	Steady on	In the system startup preparation phase, the SYS indicator is steady green for no more than 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a temperature alarm has been generated.
			Red	Fast blinking	The indicator identifies the switch to maintain. The indicator can be turned on or off remotely to help field engineers find the switch to maintain.
3	ALM	Alarm indicator	-	Steady off	There is no protection alarm or fault alarm.
			Red	Steady on	A fault alarm is generated due to device faults and cannot be cleared.
			Red	Slow blinking	A protection alarm is generated due to external faults and can be cleared.
4	USB	USB-based deployment indicator	-	Steady off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.

No.	Indicator	Name	Color	Status	Description	
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.	
5	-	Service port indicator	Green	Steady off	The port is not connected or has been shut down.	
				Steady on	The port is connected.	
				Blinking	The port is sending or receiving data.	
			Yellow	Steady off	The port does not supply power to any PD.	
				Steady on	The port is supplying power to the connected PD.	
				Blinking	The PD connected to the port is not a standard PD or its power exceeds the maximum power or power threshold of the port.	
6	-	ETH port indicator	-	Steady off	The ETH port is not connected.	
				Green and yellow	Steady on	The ETH port is connected.
				Green and yellow	Blinking	The port is sending or receiving data.

## Ports

**Table 4-1941** Ports on the S5735-S8P2X-IA200H1

Port	Connector Type	Description	Available Components
10/100/1000BASE-T PoE+ port	RJ45	A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.  The port supports the PoE function.	<a href="#">Ethernet cable</a>
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.  If one port uses a GPON optical module, the other port cannot be used at the same time.	<ul style="list-style-type: none"> <li>• <a href="#">Industrial optical modules</a></li> <li>• <a href="#">GPON optical modules</a></li> <li>• Third-party GPON optical modules (Hisense LTE3415-SH+ and CIG G-97S)</li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Power Supply System

The S5735-S8P2X-IA200H1 has a built-in AC power module and can be directly connected to the AC mains or an external PV system. External lithium batteries can also be connected to the switch for power backup. The switch supports the following power supply combinations:

- Solar hybrid scenario: PV input, AC mains input, and lithium batteries for backup
- Grid hybrid scenario: AC mains input and lithium batteries for backup
- Mains scenario: AC mains input
- Solar-Only scenario: PV input and lithium batteries for backup

**Table 4-1942** Configurations in the solar hybrid scenario

Item	Description
Function module	S5735-S8P2X-IA200H1

Item	Description
Lithium battery	Maximum configuration: two DBU20B-N12A3s or two DBU50B-N12A1s
Pole	Solar pole
PV module	Two PV modules

**Table 4-1943** Configurations in the grid hybrid scenario

Item	Description
Function module	S5735-S8P2X-IA200H1
Lithium battery	Maximum configuration: two DBU20B-N12A3s or two DBU50B-N12A1s
Pole	Mains pole

**Table 4-1944** Configurations in the mains scenario

Item	Description
Function module	S5735-S8P2X-IA200H1
Pole	Mains pole

**Table 4-1945** Configuration in the solar-only scenario

Item	Description
Function module	S5735-S8P2X-IA200H1
Lithium battery	Maximum configuration: two ESM-48100Bs or two ESM-48100A8s
Pole	Solar pole
PV module	Two PV modules or Four PV modules

 **NOTE**

For details about poles, lithium batteries, and PV modules, see [PowerCube 500 User Manual \(S5735-S8P2X-IA200H1\)](#).

The S5735-S8P2X-IA200H1 can also supply power to external devices. For details, see [Table 4-1946](#).

**Table 4-1946** Supplying power to external devices

Power Supply Mode	Available Power
PoE	200 W Maximum number of PoE ports (fully loaded): <ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 8</li> <li>802.3at (30 W per port): 6</li> </ul>
12 V DC	Two 12 V DC outputs provide a total of 72 W power. The maximum power of a single output is 72 W.
24 V AC	Two 24 V AC outputs provide a total of 100 W power. The maximum power of a single output is 100 W.

 **NOTE**

The total maximum output power of PoE power output, two 12 V DC outputs, and two 24 V AC outputs is 200 W.

In the following scenarios, a device can supply up to 190 W available power.

- PoE-only scenario: If a device that is supplying more than 190 W PoE power is restarted upon power-off or is reset, the device can only supply up to 190 W available power due to load fluctuation errors.
- Hybrid power supply scenario: When a device uses both PoE and 12 V/24 V power supplies, and the device is powered on with loads, is restarted upon power-off, or is reset, the device can only supply up to 190 W power due to load fluctuation errors.

## Heat Dissipation System

The S5735-S8P2X-IA200H1 has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 4-1947** Technical specifications of the S5735-S8P2X-IA200H1

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Including the protruding portions: 582 mm x 300 mm x 165.5 mm (22.91 in. x 11.81 in. x 6.52 in.) Excluding the protruding portions: 570 mm x 300 mm x 150 mm (22.44 in. x 11.81 in. x 5.91 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	270 mm x 450 mm x 670 mm (10.63 in. x 17.72 in. x 26.38 in.)
Weight without packaging [kg(lb)]	14.5 kg (31.97 lb)
Weight with packaging [kg(lb)]	17.6 kg (38.8 lb)

Item	Specification
Typical power consumption [W]	38 W
Typical heat dissipation [BTU/hour]	129.66 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>With no output power: 45 W</li> <li>With output power: 269 W (device power consumption: 69 W; output power: 200 W)</li> </ul>
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"> <li>With no output power: 153.55</li> <li>With output power: 917.86</li> </ul>
Static power consumption [W]	37 W
MTBF [years]	41.85 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans)
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans)
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	The S5735-S8P2X-IA200H1 has a built-in AC power module and can be directly connected to the AC mains or an external PV system. External lithium batteries can also be connected to the switch for power backup.
Long-term operating temperature [°C(°F)]	-40°C to +55°C (-40°F to 131°F) <b>NOTE</b> -35°C to +55°C (-31°F to +131°F): sunshade needed; no requirement on the air velocity; GPON optical modules supported -35°C to +45°C (-31°F to +113°F): 1120 W/m <sup>2</sup> solar radiation (maximum); no requirement on the air velocity -40°C to -35°C (-40°F to -31°F): Stable port performance can be achieved only when at least four Ethernet electrical ports go Up.



Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 2000-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 200 m (656 ft.).
Storage temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	-150 m to 5000 m (-492 to 16404 ft.)
Storage altitude [m(ft.)]	-150 m to 5000 m (-492 to 16404 ft.)
Power supply mode	<ul style="list-style-type: none"> <li>• AC built-in</li> <li>• Solar power supply</li> <li>• Lithium battery power supply</li> </ul>
Rated input voltage [V]	AC input: 100 V AC to 240 V AC, 50/60 Hz PV input: 72 V DC Battery input: 53.5 V DC
Input voltage range [V]	AC input: 85 V AC to 290 V AC, 45 Hz to 65 Hz PV input: 36 V DC to 120 V DC
Maximum input current [A]	AC input: 4.5 A PV input: 28 A
Memory	1 GB
Flash memory	512 MB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	±1.5 kV in differential mode, ±6 kV in common mode

Item	Specification
Power supply surge protection [kV]	Surge current: <ul style="list-style-type: none"> <li>AC input: 20 kA</li> <li>PV input: <math>\pm 3</math> kA in differential mode; <math>\pm 5</math> kA in common mode</li> <li>Battery input: <math>\pm 3</math> kA in differential mode; <math>\pm 5</math> kA in common mode</li> </ul> Surge: <ul style="list-style-type: none"> <li>AC input: <math>\pm 6</math> kV in differential mode; <math>\pm 6</math> kV in common mode</li> <li>PV input: <math>\pm 2</math> kV in differential mode; <math>\pm 4</math> kV in common mode</li> <li>Battery input: <math>\pm 2</math> kV in differential mode; <math>\pm 4</math> kV in common mode</li> <li>12 V DC output: <math>\pm 2</math> kV in differential mode; <math>\pm 4</math> kV in common mode</li> <li>24 V AC output: <math>\pm 2</math> kV in differential mode; <math>\pm 6</math> kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP55
Types of fans	None
Heat dissipation mode	Natural heat dissipation without fans
Airflow direction	-
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification

 NOTE

The protection level of the device is IP55 and can be installed in a class C environment (GR-487).

## 4.37.4 S5735-S24T4X-I

### Version Mapping

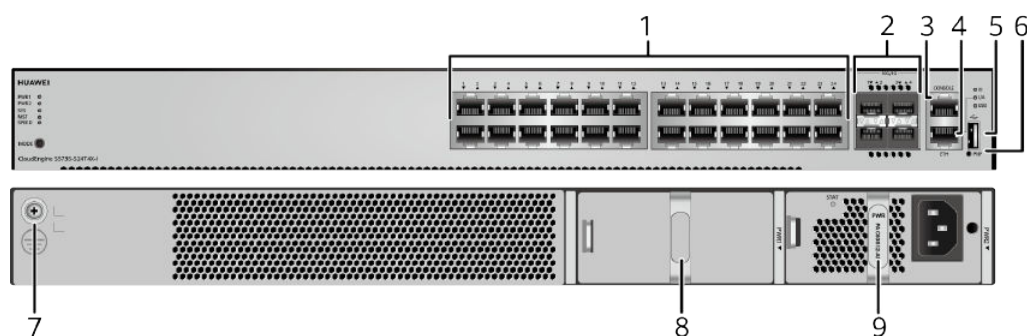
**Table 4-1948** lists the mapping between the S5735-S24T4X-I chassis and software versions.

**Table 4-1948** Version mapping

Series	Model	Software Version
S5735-S-I	S5735-S24T4X-I	Supported in V200R019C10SPC500 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-682** S5735-S24T4X-I appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: • <b>Industrial optical module</b>
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.11 PAC60S12-AR (60 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>
9	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.11 PAC60S12-AR (60 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1949](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1949** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1950](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1950** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1951](#).

**Table 4-1951** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1952](#) describes the attributes of an ETH management port.

**Table 4-1952** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

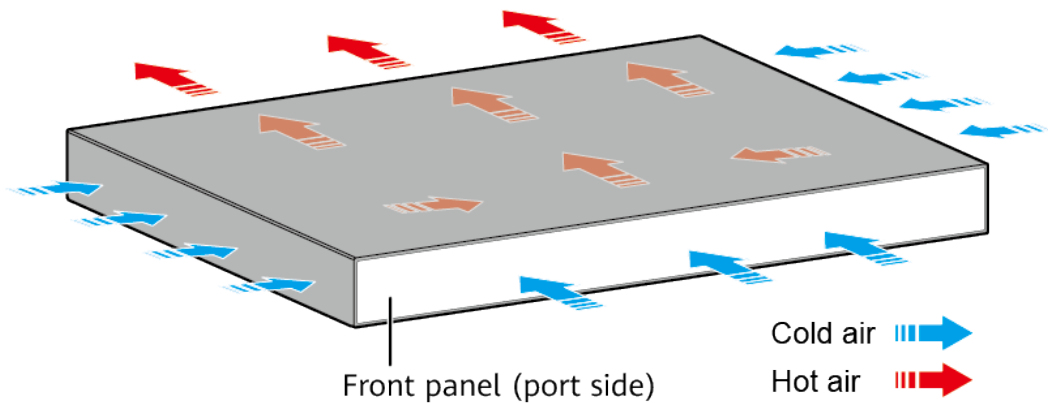
The S5735-S24T4X-I has similar indicators to those on the S5735-S24P4X except that the S5735-S24T4X-I does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The S5735-S24T4X-I can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

## Heat Dissipation

The S5735-S24T4X-I has three built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1953** lists technical specifications of the S5735-S24T4X-I.

**Table 4-1953** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	62.88 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)</li> </ul>

Item	Description
Weight (with packaging)	7.02 kg (15.48 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R020C00 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	55.2 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	36.8 W
Operating temperature	-40°C to +65°C (-40°F to +149°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).



Item	Description
Short-term operating temperature	<p>-40°C to +70°C (-40°F to 158°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 65°C (149°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 65°C (149°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 65°C (149°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +75°C (-40°F to +167°F)
Noise under normal temperature (27°C, sound power)	< 49.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010960

## 4.38 S5735S-S

### 4.38.1 S5735S-S24T4S-A

#### Version Mapping

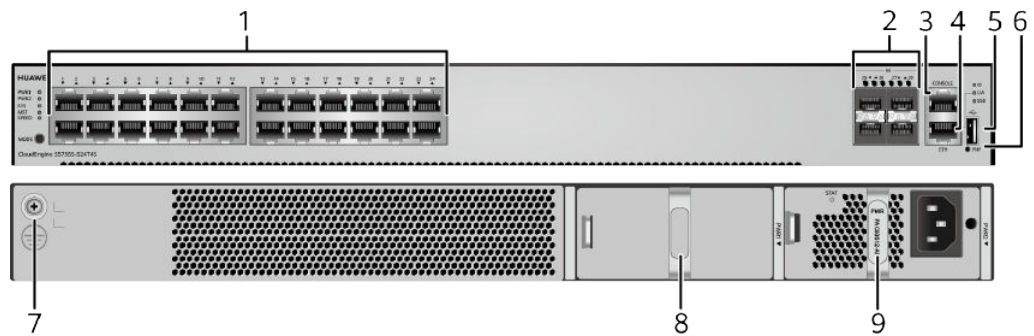
**Table 4-1954** lists the mapping between the S5735S-S24T4S-A chassis and software versions.

**Table 4-1954** Version mapping

Series	Model	Software Version
S5735S-S	S5735S-S24T4S-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-683** S5735S-S24T4S-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• FE optical module (applicable in V200R021C00 and later versions)</li> <li>• GE optical module</li> <li>• GE-CWDM optical module</li> <li>• GE-DWDM optical module</li> <li>• GE copper module</li> <li>• 10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions)</li> <li>• 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)</li> <li>• 3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)</li> <li>• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.11 PAC60S12-AR (60 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>
9	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.11 PAC60S12-AR (60 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1955](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1955** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it

can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1956](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1956** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1957](#).

**Table 4-1957** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1958](#) describes the attributes of an ETH management port.

**Table 4-1958** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

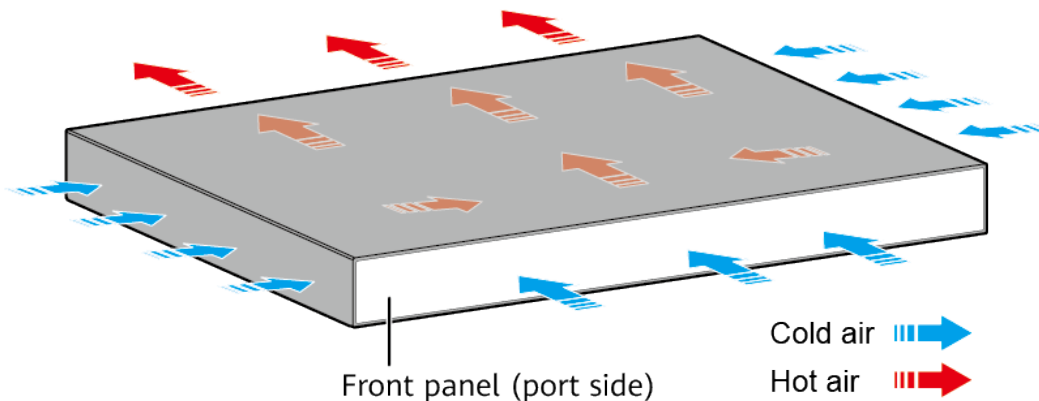
The S5735S-S24T4S-A has similar indicators to those on the S5735-S24P4X except that the S5735S-S24T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation

The S5735S-S24T4S-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1959](#) lists technical specifications of the S5735S-S24T4S-A.

**Table 4-1959** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	69.42 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)</li> </ul>

Item	Description
Weight (with packaging)	7.89 kg (17.4 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	44 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	29 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).



Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010939

## 4.38.2 S5735S-S32ST4X-A

### Version Mapping

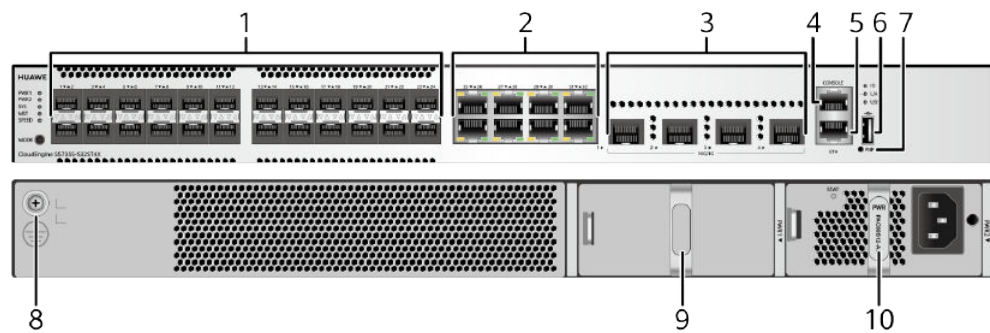
[Table 4-1960](#) lists the mapping between the S5735S-S32ST4X-A chassis and software versions.

**Table 4-1960** Version mapping

Series	Model	Software Version
S5735S-S	S5735S-S32ST4X-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-684** S5735S-S32ST4X-A appearance



1	Twenty-four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> <li>• <b>FE optical module</b></li> <li>• <b>GE optical module</b> (maximum transmission distance ≤ 40 km)</li> <li>• <b>GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)</b></li> </ul>	2	Eight 10/100/1000BASE-T ports
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>	4	One console port
5	One ETH management port	6	One USB port
7	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	8	<p>Ground screw</p> <p><b>NOTE</b></p> <p>It is used with a <b>ground cable</b>.</p>
9	<p>Power module slot 1</p> <p><b>NOTE</b></p> <p>Applicable power module:</p> <ul style="list-style-type: none"> <li>• <b>5.11 PAC60S12-AR (60 W AC&amp;240 V DC Power Module)</b></li> <li>• <b>5.30 PDC1000S12-DB (1000 W DC Power Module)</b></li> <li>• <b>5.15 PDC180S12-CR (180 W DC Power Module)</b> (applicable in V200R020C00 and later versions)</li> </ul>	10	<p>Power module slot 2</p> <p><b>NOTE</b></p> <p>Applicable power module:</p> <ul style="list-style-type: none"> <li>• <b>5.11 PAC60S12-AR (60 W AC&amp;240 V DC Power Module)</b></li> <li>• <b>5.30 PDC1000S12-DB (1000 W DC Power Module)</b></li> <li>• <b>5.15 PDC180S12-CR (180 W DC Power Module)</b> (applicable in V200R020C00 and later versions)</li> </ul>

## Port Description

### 100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 4-1961](#) describes the attributes of a 100/1000BASE-X port.

**Table 4-1961** Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1962](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1962** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1963](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1963** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1964](#).

**Table 4-1964** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1965](#) describes the attributes of an ETH management port.

**Table 4-1965** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

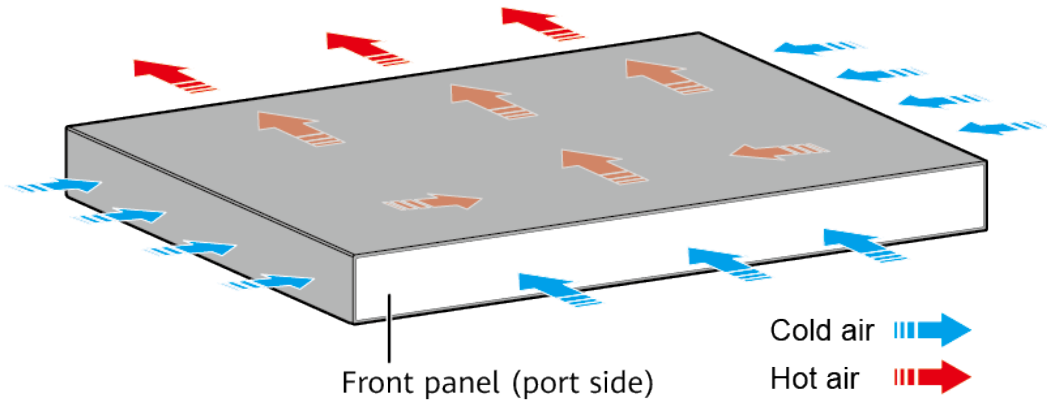
The S5735S-S32ST4X-A has similar indicators to those on the S5735-S24P4X except that the S5735S-S32ST4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation

The S5735S-S32ST4X-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-1966** lists technical specifications of the S5735S-S32ST4X-A.

**Table 4-1966** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	68.59 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)</li> </ul>

Item	Description
Weight (with packaging)	8.15 kg (17.97 lb)
Stack ports	Any 10/100/1000BASE-T ports, 100/1000BASE-X ports, or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>● AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>● High-Voltage DC input: 240 V DC</li> <li>● DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>● High-Voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	66 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>● Tested according to ATIS standard</li> <li>● EEE enabled</li> <li>● No PoE power consumption</li> </ul>	47 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).



Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 59.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010932

### 4.38.3 S5735S-S48T4S-A

#### Version Mapping

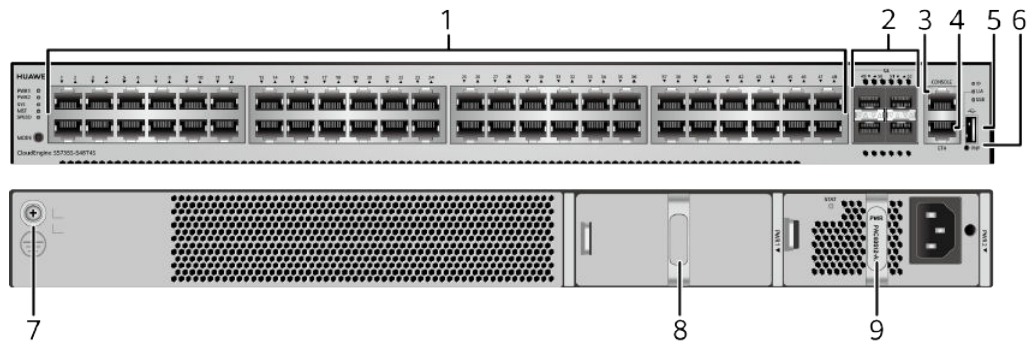
[Table 4-1967](#) lists the mapping between the S5735S-S48T4S-A chassis and software versions.

**Table 4-1967** Version mapping

Series	Model	Software Version
S5735S-S	S5735S-S48T4S-A	V200R019C00 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-685** S5735S-S48T4S-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> <li>• <b>FE optical module (applicable in V200R021C00 and later versions)</b></li> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module</b></li> <li>• <b>10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions)</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.11 PAC60S12-AR (60 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>
9	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.11 PAC60S12-AR (60 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1968](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1968** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a FE optical module, it can transmit and receive data at 100 Mbit/s. When a 1000BASE-X port uses a GE copper module, it

can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 4-1969](#) describes the attributes of a 1000BASE-X Ethernet optical port.

**Table 4-1969** Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1970](#).

**Table 4-1970** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1971](#) describes the attributes of an ETH management port.

**Table 4-1971** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

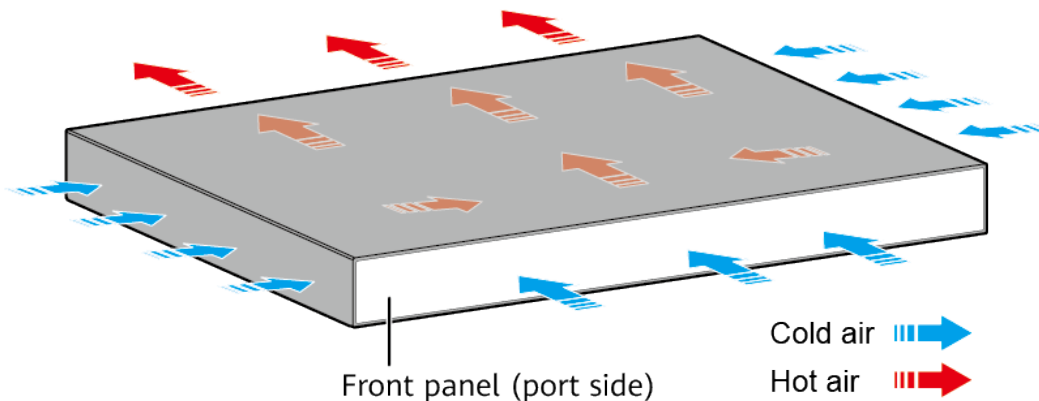
The S5735S-S48T4S-A has similar indicators to those on the S5735-S24P4X except that the S5735S-S48T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

## Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation

The S5735S-S48T4S-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1972](#) lists technical specifications of the S5735S-S48T4S-A.

**Table 4-1972** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	74.7 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)</li> </ul>

Item	Description
Weight (with packaging)	8.37 kg (18.45 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>High-Voltage DC input: 240 V DC</li> <li>DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>High-Voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	58 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>Tested according to ATIS standard</li> <li>EEE enabled</li> <li>No PoE power consumption</li> </ul>	41 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).



Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010942

## 4.38.4 S5735S-S24T4X-A

### Version Mapping

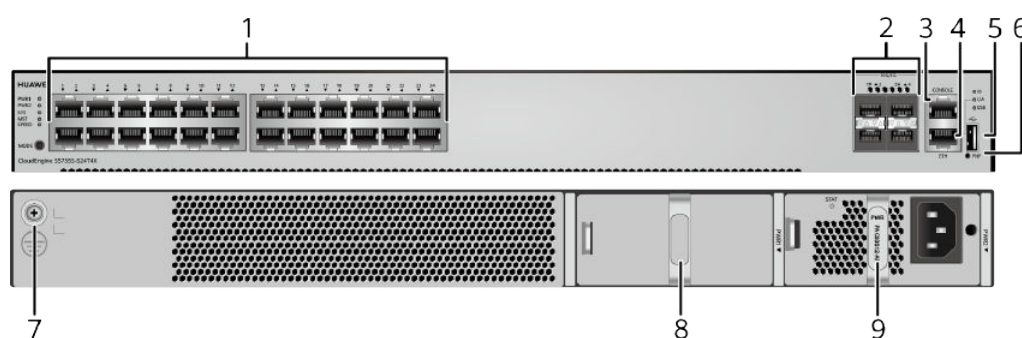
[Table 4-1973](#) lists the mapping between the S5735S-S24T4X-A chassis and software versions.

**Table 4-1973** Version mapping

Series	Model	Software Version
S5735-S	S5735S-S24T4X-A	Supported in V200R019C10SPC500 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-686** S5735S-S24T4X-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
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3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Power module slot 1 <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <a href="#">5.11 PAC60S12-AR (60 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>
9	Power module slot 2 <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <a href="#">5.11 PAC60S12-AR (60 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1974](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1974** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

Attribute	Description
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1975](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1975** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1976](#).

**Table 4-1976** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1977](#) describes the attributes of an ETH management port.

**Table 4-1977** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

### Indicator Description

The S5735S-S24T4X-A has similar indicators to those on the S5735-S24P4X except that the S5735S-S24T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

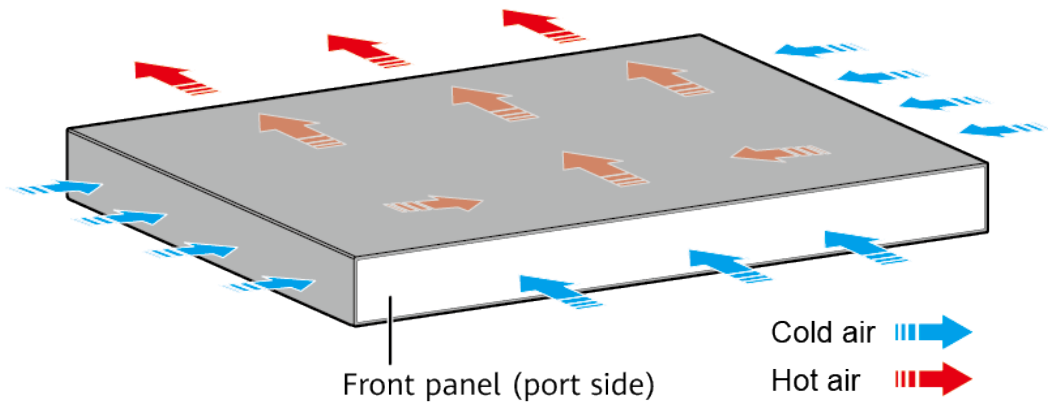
### Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in

the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation

The S5735S-S24T4X-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1978](#) lists technical specifications of the S5735S-S24T4X-A.

**Table 4-1978** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	69.42 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>• Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)</li> </ul>
Weight (with packaging)	7.89 kg (17.4 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>• High-Voltage DC input: 240 V DC</li> <li>• DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>• AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>• High-Voltage DC input: 190 V DC to 290 V DC</li> <li>• DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	46 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>• Tested according to ATIS standard</li> <li>• EEE enabled</li> <li>• No PoE power consumption</li> </ul>	31 W

Item	Description
Operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010967



## 4.38.5 S5735S-S24P4X-A

### Version Mapping

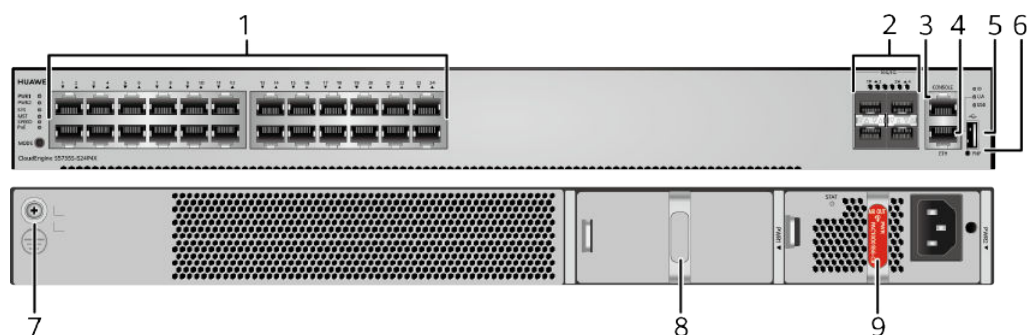
**Table 4-1979** lists the mapping between the S5735S-S24P4X-A chassis and software versions.

**Table 4-1979** Version mapping

Series	Model	Software Version
S5735S-S	S5735S-S24P4X-A	Supported in V200R019C10SPC500 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-687** S5735S-S24P4X-A appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p><b>NOTICE</b></p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> </ul>
9	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1980](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1980** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1981](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1981** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1982](#).

**Table 4-1982** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1983](#) describes the attributes of an ETH management port.

**Table 4-1983** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5735S-S24P4X-A has the same types of indicators as the S5735-S24P4X. For details, see [Indicator Description](#).

## Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1984** Power supply configurations

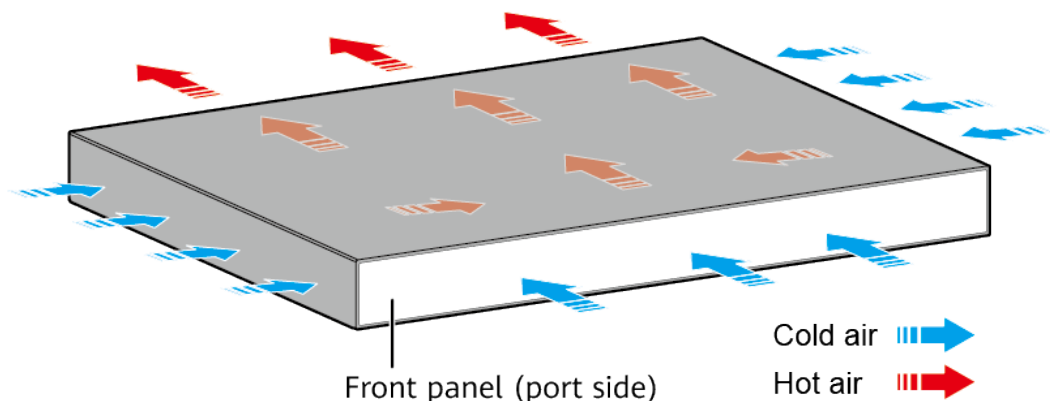
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	-	874 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>
1000 W AC (110 V)	-	779 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1600 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 24</li> <li>802.3at (30 W per port): 24</li> </ul>

### NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

## Heat Dissipation

The S5735S-S24P4X-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1985](#) lists technical specifications of the S5735S-S24P4X-A.

**Table 4-1985** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	59.88 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)</li> </ul>
Weight (with packaging)	8.49 kg (18.72 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Supported

Item	Description
Rated voltage range	<ul style="list-style-type: none"><li>AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li><li>High-Voltage DC input: 240 V DC</li><li>DC input: -48 V DC to -60 V DC</li></ul>
Maximum voltage range	<ul style="list-style-type: none"><li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li><li>High-Voltage DC input: 190 V DC to 290 V DC</li><li>DC input: -38.4 V DC to -72 V DC</li></ul>
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"><li>Not providing the PoE function: 65 W</li><li>100% PoE loads: 847 W (PoE: 720 W)</li></ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"><li>Tested according to ATIS standard</li><li>EEE enabled</li><li>No PoE power consumption</li></ul>	51 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).



Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010969

## 4.38.6 S5735S-S48T4X-A

### Version Mapping

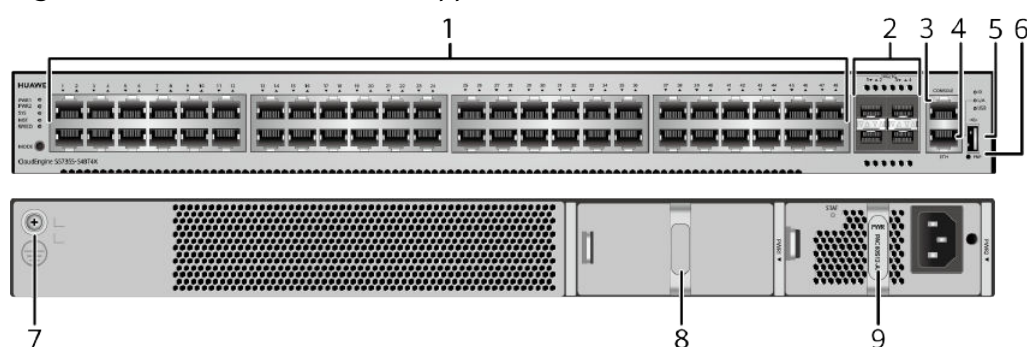
[Table 4-1986](#) lists the mapping between the S5735S-S48T4X-A chassis and software versions.

**Table 4-1986** Version mapping

Series	Model	Software Version
S5735S-S	S5735S-S48T4X-A	Supported in V200R019C10SPC500 and later versions <b>NOTE</b> V200R021C01 is not supported.

## Appearance and Structure

**Figure 4-688** S5735S-S48T4X-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
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3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	8	Power module slot 1 <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <a href="#">5.11 PAC60S12-AR (60 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>
9	Power module slot 2 <b>NOTE</b> Applicable power module: <ul style="list-style-type: none"> <li>• <a href="#">5.11 PAC60S12-AR (60 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a> (applicable in V200R020C00 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1987](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1987** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

Attribute	Description
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1988](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1988** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1989](#).

**Table 4-1989** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1990](#) describes the attributes of an ETH management port.

**Table 4-1990** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

### Indicator Description

The S5735S-S48T4X-A has similar indicators to those on the S5735-S24P4X except that the S5735S-S48T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

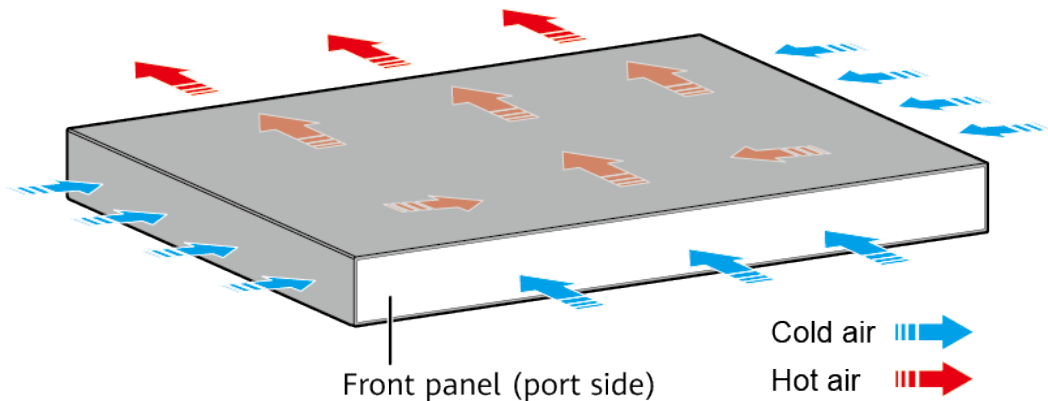
### Power Supply Configuration

The switch can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in

the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation

The S5735S-S48T4X-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



### NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1991](#) lists technical specifications of the S5735S-S48T4X-A.

**Table 4-1991** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	74.7 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>● Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>● Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)</li> </ul>
Weight (with packaging)	8.37 kg (18.45 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> <li>● AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>● High-Voltage DC input: 240 V DC</li> <li>● DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz</li> <li>● High-Voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	59 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>● Tested according to ATIS standard</li> <li>● EEE enabled</li> <li>● No PoE power consumption</li> </ul>	40 W

Item	Description
Operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> <li>• EMC certification</li> <li>• Safety certification</li> <li>• Manufacturing certification</li> </ul>
Part number	98010968



## 4.38.7 S5735S-S48P4X-A

### Version Mapping

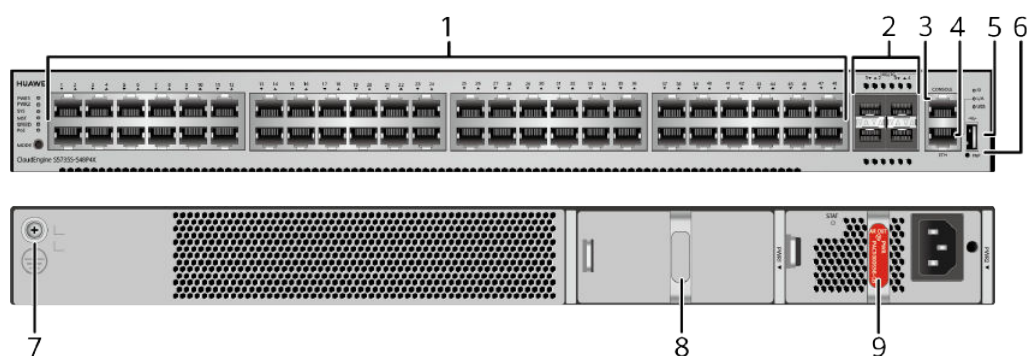
**Table 4-1992** lists the mapping between the S5735S-S48P4X-A chassis and software versions.

**Table 4-1992** Version mapping

Series	Model	Software Version
S5735S-S	S5735S-S48P4X-A	Supported in V200R019C10SPC500 and later versions <b>NOTE</b> V200R021C01 is not supported.

### Appearance and Structure

**Figure 4-689** S5735S-S48P4X-A appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> <li>• <b>GE optical module</b></li> <li>• <b>GE-CWDM optical module</b></li> <li>• <b>GE-DWDM optical module</b></li> <li>• <b>GE copper module (100M/1000M auto-sensing)</b></li> <li>• <b>10GE SFP+ optical module (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM optical module</b></li> <li>• <b>10GE-DWDM optical module</b></li> <li>• <b>1 m and 3 m SFP+ high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)</b></li> </ul>
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> </ul>
9	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power module:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R019C10 and later versions)</li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> </ul>	-	-

## Port Description

### 10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 4-1993](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

**Table 4-1993** Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

### 10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 4-1994](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

**Table 4-1994** Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

### Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 4-1995](#).

**Table 4-1995** Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

### ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 4-1996](#) describes the attributes of an ETH management port.

**Table 4-1996** Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

### USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

#### NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

## Indicator Description

The S5735S-S48P4X-A has the same types of indicators as the S5735-S24P4X. For details, see [Indicator Description](#).

## Power Supply Configuration

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-1997** Power supply configurations

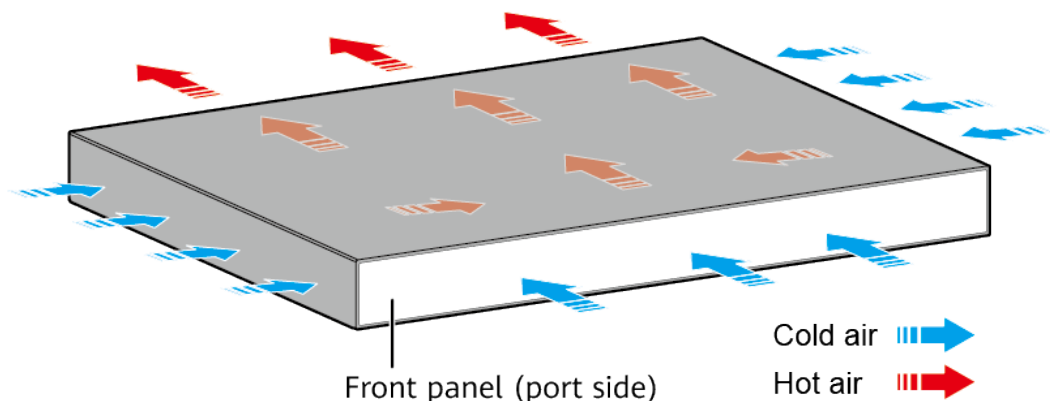
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	-	874 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 29</li> </ul>
1000 W AC (110 V) 1000 W DC	-	779 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 25</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V) 1000 W DC	1600 W	<ul style="list-style-type: none"> <li>802.3af (15.4 W per port): 48</li> <li>802.3at (30 W per port): 48</li> </ul>

### NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

## Heat Dissipation

The S5735S-S48P4X-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



 NOTE

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

[Table 4-1998](#) lists technical specifications of the S5735S-S48P4X-A.

**Table 4-1998** Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the <b>display version</b> command.
Mean time between failures (MTBF)	54.88 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: $\pm 7$ kV
Power supply surge protection	<ul style="list-style-type: none"> <li>Using AC power modules: <math>\pm 6</math> kV in differential mode, <math>\pm 6</math> kV in common mode</li> <li>Using DC power modules: <math>\pm 2</math> kV in differential mode, <math>\pm 4</math> kV in common mode</li> </ul>
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)</li> <li>Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)</li> </ul>
Weight (with packaging)	8.74 kg (19.27 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Supported

Item	Description
Rated voltage range	<ul style="list-style-type: none"> <li>● AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li> <li>● High-Voltage DC input: 240 V DC</li> <li>● DC input: -48 V DC to -60 V DC</li> </ul>
Maximum voltage range	<ul style="list-style-type: none"> <li>● AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li> <li>● High-Voltage DC input: 190 V DC to 290 V DC</li> <li>● DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> <li>● Not providing the PoE function: 77 W</li> <li>● 100% PoE loads: 1661 W (PoE: 1440 W)</li> </ul>
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> <li>● Tested according to ATIS standard</li> <li>● EEE enabled</li> <li>● No PoE power consumption</li> </ul>	59 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <b>NOTE</b> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).



Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p><b>NOTE</b></p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"><li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li><li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li><li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li></ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"><li>• EMC certification</li><li>• Safety certification</li><li>• Manufacturing certification</li></ul>
Part number	98010970

## 4.39 S5735S-H

### 4.39.1 S5735S-H24S4XC-A

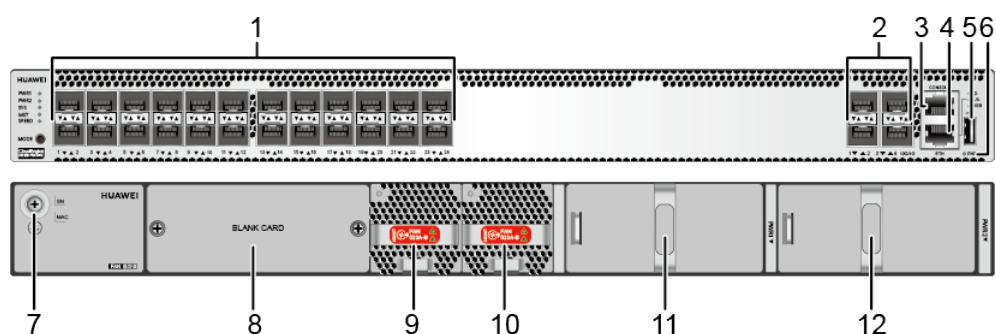
## Overview

**Table 4-1999** Basic information about the S5735S-H24S4XC-A

Item	Details
Description	S5735S-H24S4XC bundle (24*GE SFP ports, 4*10GE SFP+ ports, 1*expansion slot, 1*AC power module)
Part Number	98011041
Model	S5735S-H24S4XC-A
First supported version	V200R021C01

## Components

**Figure 4-690** S5735S-H24S4XC-A appearance



- |   |                                  |   |                              |
|---|----------------------------------|---|------------------------------|
| 1 | Twenty-four 100/1000BASE-X ports | 2 | Four 10GE SFP+ optical ports |
| 3 | One console port                 | 4 | One ETH management port      |
| 5 | One USB port                     | 6 | One PNP button               |

### NOTICE

To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.

To reset the switch, press the button.

Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7 Ground screw

**NOTE**

It is used with a [ground cable](#).

8 Rear card slot

**NOTE**

Applicable card:

- [S7X08000 \(02312URW\)](#)
- [S7X08000 \(02312URW-002\)](#)  
(applicable in V200R021C10SPC600 and later versions)
- [ES5D21Q02Q00](#)
- [ES5D21Q04Q01](#)
- [S7Q02001 \(02313UBW\)](#)
- [S7Q02001 \(02313UBW-002\)](#)  
(applicable in V200R021C10SPC600 and later versions)

9 Fan module slot 1

**NOTE**

Applicable fan module: [7.4 FAN-023A-B \(Fan box\(B,FAN panel side exhaust\)\)](#)

10 Fan module slot 2

**NOTE**

Applicable fan module: [7.4 FAN-023A-B \(Fan box\(B,FAN panel side exhaust\)\)](#)

11 Power module slot 1

**NOTE**

Applicable power modules:

- [5.20 PAC600S12-CB \(600 W AC&240 V DC Power Module\)](#)
- [5.21 PAC600S12-DB \(600 W AC&240 V DC Power Module\)](#)
- [5.22 PAC600S12-EB \(600 W AC&240 V DC Power Module\)](#)
- [5.30 PDC1000S12-DB \(1000 W DC Power Module\)](#)
- [5.12 PAC150S12-R \(150 W AC Power Module\)](#)
- [5.15 PDC180S12-CR \(180 W DC Power Module\)](#)

12 Power module slot 2

**NOTE**

Applicable power modules:

- [5.20 PAC600S12-CB \(600 W AC&240 V DC Power Module\)](#)
- [5.21 PAC600S12-DB \(600 W AC&240 V DC Power Module\)](#)
- [5.22 PAC600S12-EB \(600 W AC&240 V DC Power Module\)](#)
- [5.30 PDC1000S12-DB \(1000 W DC Power Module\)](#)
- [5.12 PAC150S12-R \(150 W AC Power Module\)](#)
- [5.15 PDC180S12-CR \(180 W DC Power Module\)](#)

## Ports

**Table 4-2000** Ports on the S5735S-H24S4XC-A

Port	Connector Type	Description	Available Components
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s.	<ul style="list-style-type: none"> <li>• <a href="#">FE SFP/eSFP optical modules</a></li> <li>• <a href="#">GE eSFP optical modules</a></li> <li>• <a href="#">GE SFP copper module</a></li> </ul>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE-CWDM eSFP optical modules</b></li> <li>● <b>GE-DWDM eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>● <b>10GE-CWDM SFP+ optical modules</b></li> <li>● <b>10GE-DWDM SFP+ optical modules</b></li> <li>● <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables</b></li> <li>● <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

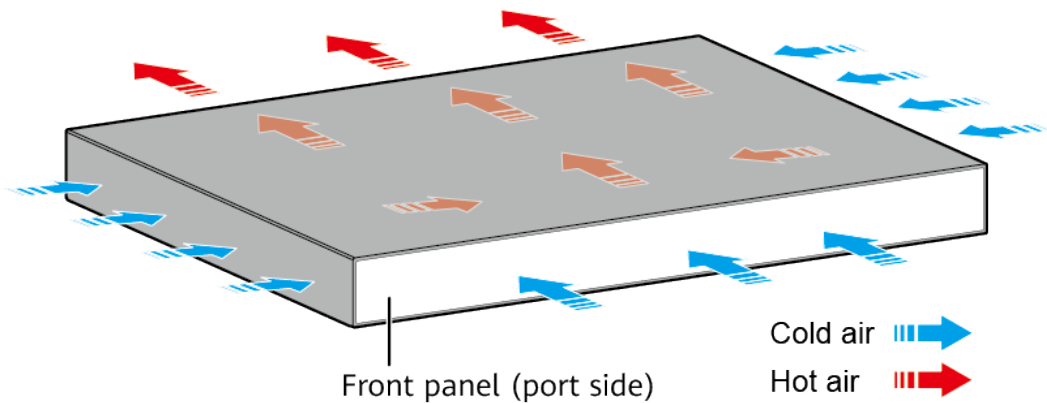
The S5735S-H24S4XC-A has the same types of indicators as the S5736-S24S4XC. For details, see the S5736-S24S4XC.

## Power Supply System

The switch can use a single power module or two power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation System

The switch uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-2001** Technical specifications of the S5735S-H24S4XC-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.40 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 444.0 mm (1.72 in. x 17.40 in. x 17.48 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	150mm x 710mm x 560mm (5.90 in. x 27.95 in. x 22.05 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	6 kg (13.23 lb)
Weight with packaging [kg(lb)]	9 kg (19.84 lb)
Typical power consumption [W]	63 W
Typical heat dissipation [BTU/hour]	214.96 BTU/hour
Maximum power consumption [W]	74 W
Maximum heat dissipation [BTU/hour]	252.5 BTU/hour
Static power consumption [W]	37 W
MTBF [years]	65.79 years
MTTR [hours]	2 hours

Item	Specification
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	49.9 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	37.8 dB(A)
Number of card slots	1
Number of power slots	2
Number of fans modules	2
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)



Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: -48 V DC to -60 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC; 45 Hz to 65 Hz</li> <li>High-voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum input current [A]	The current specifications depend on the pluggable power modules in use. For details, see the related power module specifications.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	<ul style="list-style-type: none"> <li>Configured with AC power modules: <math>\pm 6</math> kV in differential mode and <math>\pm 6</math> kV in common mode</li> <li>Configured with DC power modules: <math>\pm 2</math> kV in differential mode and <math>\pm 4</math> kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Pluggable
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left, front and right, air exhaustion from behind
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.40 S5736-S

### 4.40.1 S5736-S24UM4XC (98011020)

#### Overview

**Table 4-2002** Basic information about the S5736-S24UM4XC

Item	Details
Description	S5736-S24UM4XC base (24*100M/1G Ethernet ports, optional RTU upgrade to 2.5/5/10G, 4*10GE SFP+ ports, 1*expansion slot, PoE++, without power module)
Part Number	98011020
Model	S5736-S24UM4XC
First supported version	V200R020C00
Other part numbers	98011020-001: S5736-S24UM4XC 2.5&10G bundle (12*100M/1G/2.5G Ethernet ports, 12*100M/1G/2.5G/5G/10G Ethernet ports, optional RTU upgrade to 5/10G, 4*10GE SFP+ ports, 1*expansion slot, PoE++, 1*1000W AC power) 98011020-004: S5736-S24UM4XC 10G bundle (24*100M/1G/2.5G/5G/10G Ethernet ports, 4*10GE SFP+ ports, 1*expansion slot, PoE++, 1*1000W AC power)

There are several S5736-S24UM4XC bundles, which consist of different power supplies and ports, as listed in [Table 4-2003](#).

**Table 4-2003** S5736-S24UM4XC bundles

Part Number	Description	Remarks
98011020	S5736-S24UM4XC Base(24*100M/1G Ethernet ports,Optional RTU upgrade to 2.5/5/10G, 4*10GE SFP+ ports, 1*expansion slot, PoE ++, without power module)	<p>By default, no power supply is configured.</p> <p>By default, multi-GE ports support 100 Mbit/s and 1000 Mbit/s. You can purchase an RTU license to increase the port rate to 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s.</p> <p>There is a label on the rear side of the device, which contains the rate "24*GE" supported by the multi-GE ports.</p>
98011020-001	S5736-S24UM4XC 2.5&10G Bundle(12*100M/1G/2.5G Ethernet ports, 12*100M/1G/2.5G/5G/10G Ethernet ports, Optional RTU upgrade to 5/10G, 4*10GE SFP+ ports, 1*expansion slot, PoE++, 1*1000W AC power)	<p>By default, one 1000 W AC power module is configured.</p> <p>The 2.5GE RTU license for 12 multi-GE ports and the 10GE RTU license for another 12 multi-GE ports have been activated in factory default settings. You can run the <b>assign group-speed</b> command to configure these multi-GE ports as 12 x 2.5GE and 12 x 10GE ports. You can purchase an additional RTU license to upgrade the 2.5GE ports to 5GE or 10GE ports.</p> <p>There is a label on the rear side of the device, which contains the rate "12*2.5GE+12*10GE" supported by the multi-GE ports.</p>
98011020-004	S5736-S24UM4XC 10G Bundle(24*100M/1G/2.5G/5G/10G Ethernet ports, 4*10GE SFP+ ports, 1*expansion slot, PoE++, 1*1000W AC power)	<p>By default, one 1000 W AC power module is configured.</p> <p>The 10GE RTU license for 24 multi-GE ports has been activated in factory default settings. You can run the <b>assign group-speed</b> command to configure these multi-GE ports as 24 x 10GE ports.</p> <p>There is a label on the rear side of the device, which contains the rate "24*10GE" supported by the multi-GE ports.</p>

**NOTE**

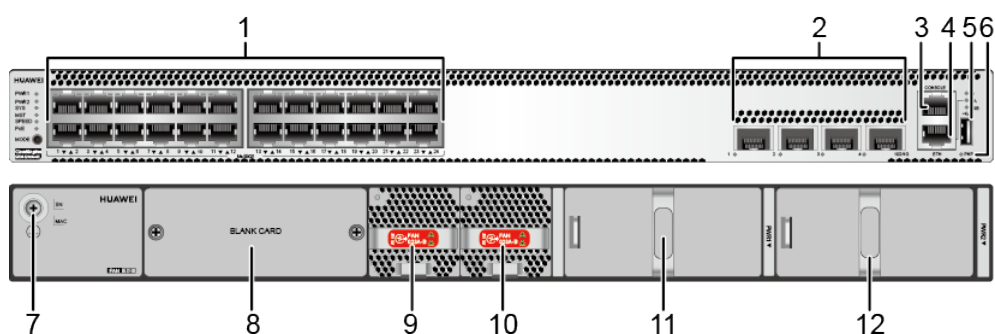
A pre-configured or loaded RTU (right to use) license of a device is bound to the device ESN and cannot be unbound or transferred to other devices.

For details about the RTU licenses supported by the device and how to load them, see the *License Usage Guide*.

The rate of MultiGE ports can be increased using the RTU license. After the license is activated, you can run the **assign group-speed** command and restart the device to make the configured maximum rate supported by the ports in the MultiGE port group take effect. To check the default rate of MultiGE ports, run the **display device group-speed configuration** command. The **BaseSpeed** field indicates the default rate.

## Components

**Figure 4-691** S5736-S24UM4XC appearance



1	Twenty-four 100M/1000M/2.5GE/5GE/10GE BASE-T PoE++ ports (multi-GE ports)	2	Four 10GE SFP+ optical ports
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Rear card slot</p> <p><b>NOTE</b> Applicable card:</p> <ul style="list-style-type: none"> <li>• <a href="#">S7X08000 (02312URW)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">S7X08000 (02312URW-002)</a> (applicable in V200R021C10SPC600 and later versions)</li> <li>• <a href="#">E55D21Q02Q00</a></li> <li>• <a href="#">E55D21Q04Q01</a></li> <li>• <a href="#">S7Q02001 (02313UBW)</a> (applicable in V200R021C01 and later versions)</li> <li>• <a href="#">S7Q02001 (02313UBW-002)</a> (applicable in V200R021C10SPC600 and later versions)</li> </ul>
9	<p>Fan module slot 1</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	10	<p>Fan module slot 2</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>
11	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a> (applicable in V200R021C10 and later versions)</li> </ul>	12	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.27 PAC1000S56-DB (1000 W PoE AC&amp;240 V DC Power Module)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">5.29 PDC1000S56-CB (1000 W PoE DC Power Module)</a> (applicable in V200R021C00 and later versions)</li> <li>• <a href="#">5.23 PAC600S56-CB (600 W PoE AC&amp;240 V DC Power Module (Back to Front, Power panel side exhaust))</a> (applicable in V200R021C10 and later versions)</li> </ul>

## Ports

[Table 4-2004](#) lists the maximum transmission distances of different cables on multi-GE ports.

**Table 4-2004** Maximum transmission distances of different cables on multi-GE ports

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/1000M	2.5GE	5GE	10GE
Category 5e unshielded twisted pair (Cat5e UTP)	100 m	100 m	<ul style="list-style-type: none"> <li>• 55 m</li> <li>• 100 m (6-a-1 bundle only for the first 30 m)</li> </ul> Not recommended due to high risk	Not supported
Category 5e shielded twisted pair (Cat5e STP)	100 m	100 m	100 m	Not supported
Category 6 unshielded twisted pair (Cat6 UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported
Category 6 shielded twisted pair (Cat6 STP)	100 m	100 m	100 m	Not supported
Category 6A unshielded twisted pair (Cat6A U/UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported
Category 6A foiled/unshielded twisted pair (Cat6A F/UTP)	100 m	100 m	100 m	100 m
Category 6A shielded twisted pair (Cat6A STP)	100 m	100 m	100 m	100 m
Category 7 twisted pair (Cat7)	100 m	100 m	100 m	100 m

 **NOTE**

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

If a port works at a rate of 5 Gbit/s, you are advised not to use unshielded Ethernet cables due to the following causes:

- 802.3bz requires that the ALSNR value for alien crosstalk between Ethernet cables be greater than 0, but the standards for Cat5e and Cat6 unshielded twisted pairs do not specify the required ALSNR value. Therefore, such cables may not meet the crosstalk requirement in 802.3bz, causing severe problems such as continuous packet loss or port flapping may occur.
- According the cabling specification TIA TSB-5021, using Cat5e and Cat6 cables for 5G poses high risks.
- Currently, no clear onsite testing or evaluation method is available for checking whether ALSNR of cables conforms to 802.3bz.

If a port works at a rate of 5 Gbit/s and a Cat6 shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL Class E (+All) or TIA Cat 6 Channel (+All). If a Cat6A shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL2 Class Ea (+All) or TIA Cat6A Channel (+All). Otherwise, serious problems such as continuous packet loss or interface flapping may occur.

If a port works at a rate of 10 Gbit/s and a Cat6A shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL2 Class Ea (+All) or TIA Cat6A Channel (+All). Otherwise, serious problems such as continuous packet loss or interface flapping may occur.

If Cat5e and Cat6 unshielded twisted pairs do not meet the 5G requirement, you are advised to replace them with shielded twisted pairs or reduce the rate of ports to 2.5G.

If Cat5E, Cat6, or Cat6A unshielded twisted pairs are used on electrical ports working at 10 Gbit/s, severe problems such as continuous packet loss or port flapping may occur.

**Table 4-2005** Ports on the S5736-S24UM4XC

Port	Connector Type	Description	Available Components
100M/1000M/ 2.5GE/5GE/10GE BASE-T PoE++ port (multi-GE port)	RJ45	A 100M/1000M/ 2.5GE/5GE/10GE BASE-T port (multi-GE port) sends and receives service data at 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s.  The port supports the PoE function.	If the 2.5 Gbit/s or 5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category. If the 10 Gbit/s speed is required, the port must use an Ethernet cable of Cat6A F/UTP or higher category.



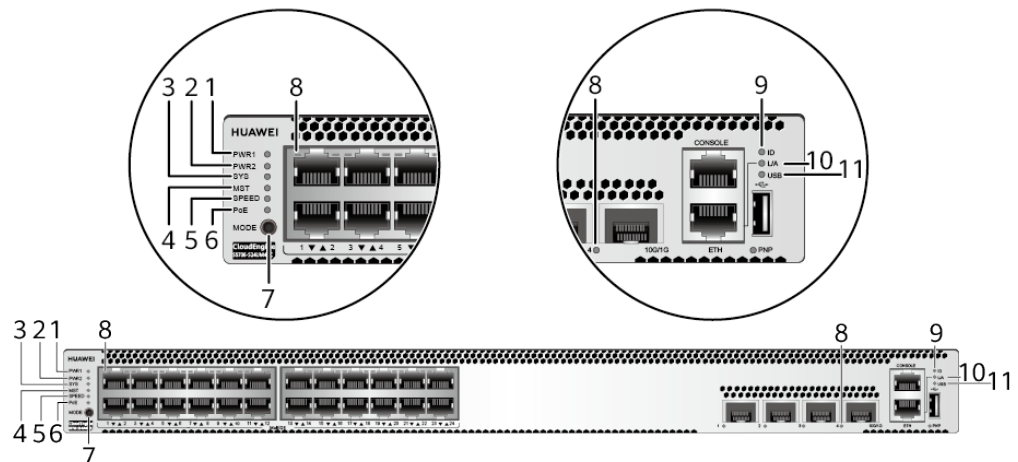
Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

Figure 4-692 Indicators on the S5736-S24UM4XC



**Table 4-2006** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.

No.	Indicator	Name	Color	Status	Description
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> <li>When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li> <li>When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li> <li>When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port.</li> <li>When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li> </ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p> <p><b>NOTE</b> Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> <li>If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows: <ul style="list-style-type: none"> <li>If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.</li> <li>If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.</li> </ul> </li> <li>If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.</li> </ul>

No.	Indicator	Name	Color	Status	Description
8	-	Multi-GE port indicator	The indicator in the upper left corner of a port indicates the indicator of a port at the top, and the indicator in the upper right corner indicates the indicator of a port at the bottom.		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-2007</a> .
		Optical port indicator	The position of the indicator corresponds to the port number.		
9	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
10	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
11	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.



No.	Indicator	Name	Color	Status	Description
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-2007** Description of service port indicators in different modes

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	Green	Off	Port indicators do not show the stack ID of the switch.
		Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
		Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	100M/1000M/2.5GE/5GE/10GE BASE-T port: The port is operating at 100 Mbit/s or 1000 Mbit/s. 1000M/10GE SFP+ port: The port is operating at 1000 Mbit/s.
	Green	Blinking	100M/1000M/2.5GE/5GE/10GE BASE-T port: The port is operating at 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s. 1000M/10GE SFP+ port: The port is operating at 10 Gbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"><li>• The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.</li><li>• The total power consumption of PDs has reached the maximum power of the switch.</li><li>• The manual power management mode is used and the port is not enabled to provide power to the PD.</li></ul>

## Power Supply System

The switch is a PoE switch and supports two power module slots, each of which can have a 1000 W PoE or 600 W PoE power module installed. Pluggable AC and DC PoE power modules can be used together in the same switch.

**Table 4-2008** Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W AC (220 V) 1000 W DC	–	841 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 14</li> <li>● 802.3bt (90 W per port): 9</li> </ul>
1000 W AC (110 V)	–	746 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 12</li> <li>● 802.3bt (90 W per port): 8</li> </ul>
1000 W AC (220 V) 1000 W DC	1000 W AC (220 V) 1000 W DC	1791 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 24</li> <li>● 802.3bt (90 W per port): 19</li> </ul>
1000 W AC (110 V) 1000 W DC	1000 W AC (110 V)	1601 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 24</li> <li>● 802.3bt (60 W per port): 24</li> <li>● 802.3bt (90 W per port): 17</li> </ul>
600 W AC (220 V)	–	461 W	<ul style="list-style-type: none"> <li>● 802.3af (15.4 W per port): 24</li> <li>● 802.3at (30 W per port): 15</li> <li>● 802.3bt (60 W per port): 7</li> <li>● 802.3bt (90 W per port): 5</li> </ul>

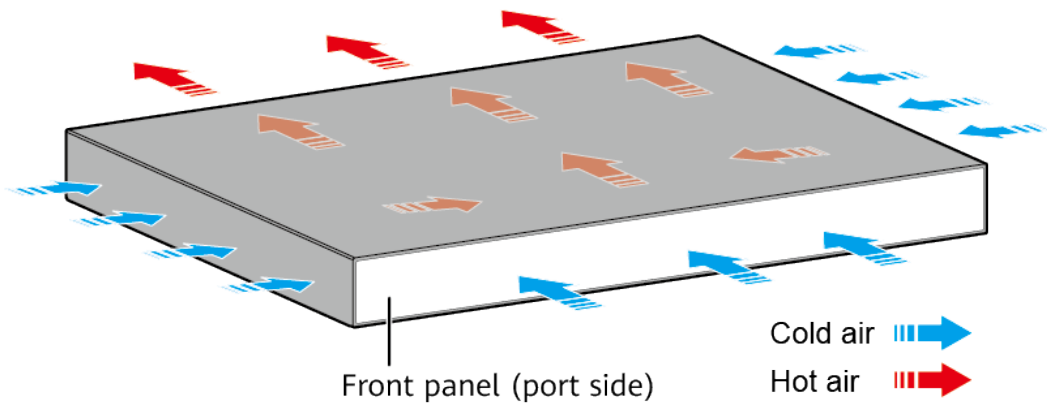
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
600 W AC (110 V)	–	176 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 11</li> <li>• 802.3at (30 W per port): 5</li> <li>• 802.3bt (60 W per port): 2</li> <li>• 802.3bt (90 W per port): 1</li> </ul>
600 W AC (220 V)	600 W AC (220 V)	1031 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 17</li> <li>• 802.3bt (90 W per port): 11</li> </ul>
600 W AC (110 V)	600 W AC (110 V)	461 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 15</li> <li>• 802.3bt (60 W per port): 7</li> <li>• 802.3bt (90 W per port): 5</li> </ul>
1000 W AC (220 V) 1000 W DC	600 W AC (220 V)	1411 W	<ul style="list-style-type: none"> <li>• 802.3af (15.4 W per port): 24</li> <li>• 802.3at (30 W per port): 24</li> <li>• 802.3bt (60 W per port): 23</li> <li>• 802.3bt (90 W per port): 15</li> </ul>

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

## Heat Dissipation System

The switch uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-2009** Technical specifications of the S5736-S24UM4XC

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.40 in. x 16.54 in.)  Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.40 in. x 17.64 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	150mm x 710mm x 560mm (5.90 in. x 27.95 in. x 22.05 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	6.7 kg (14.77 lb)
Weight with packaging [kg(lb)]	9.7 kg (21.39 lb)
Typical power consumption [W]	117 W
Typical heat dissipation [BTU/hour]	399.22 BTU/hour
Maximum power consumption [W]	<ul style="list-style-type: none"> <li>• Without PoE: 176 W (without cards)</li> <li>• Full PoE load: 1967 W (PoE: 1791 W, without cards)</li> </ul>

Item	Specification
Maximum heat dissipation [BTU/hour]	<ul style="list-style-type: none"><li>Without PoE: 600.53 (without cards)</li><li>Full PoE load: 6711.60 (without cards)</li></ul>
Static power consumption [W]	71 W
MTBF [years]	59.44 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	70.1 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	58.1 dB(A)
Number of card slots	1
Number of power slots	2
Number of fans modules	2
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: -48 V DC to -60 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC; 45 Hz to 65 Hz</li> <li>High-voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum input current [A]	The current specifications are related to the pluggable power module. For details, see Pluggable Power Modules.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: $\pm 6$ kV
Power supply surge protection [kV]	<ul style="list-style-type: none"> <li>Configured with AC power modules: <math>\pm 6</math> kV in differential mode and <math>\pm 6</math> kV in common mode</li> <li>Configured with DC power modules: <math>\pm 2</math> kV in differential mode and <math>\pm 4</math> kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Pluggable
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left, front and right, air exhaustion from behind
PoE	Supported
Certification	EMC certification Safety certification Manufacturing certification



## 4.40.2 S5736-S24S4XC

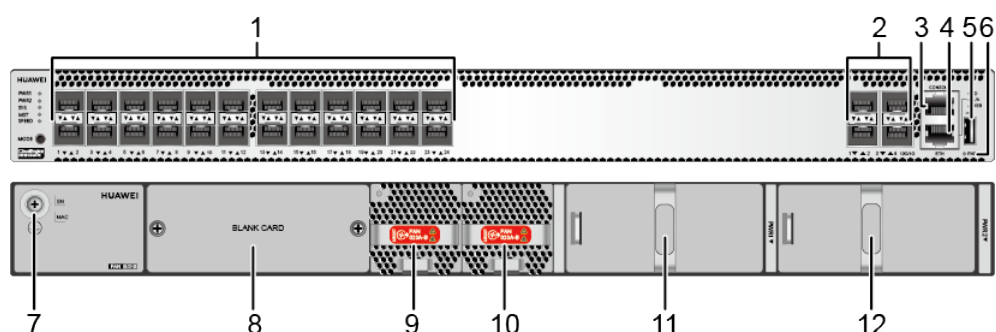
### Overview

**Table 4-2010** Basic information about the S5736-S24S4XC

Item	Details
Description	S5736-S24S4XC (24*GE SFP ports, 4*10GE SFP+ ports, 1*expansion slot, without power module)
Part Number	98011038
Model	S5736-S24S4XC
First supported version	V200R021C01

### Components

**Figure 4-693** S5736-S24S4XC appearance



1	Twenty-four 100/1000BASE-X ports	2	Four 10GE SFP+ optical ports
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Rear card slot</p> <p><b>NOTE</b> Applicable card:</p> <ul style="list-style-type: none"> <li>• <a href="#">S7X08000 (02312URW)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">S7X08000 (02312URW-002)</a> (applicable in V200R021C10SPC600 and later versions)</li> <li>• <a href="#">E55D21Q02Q00</a></li> <li>• <a href="#">E55D21Q04Q01</a></li> <li>• <a href="#">S7Q02001 (02313UBW)</a> (applicable in V200R021C01 and later versions)</li> <li>• <a href="#">S7Q02001 (02313UBW-002)</a> (applicable in V200R021C10SPC600 and later versions)</li> </ul>
9	<p>Fan module slot 1</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	10	<p>Fan module slot 2</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>
11	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> </ul>	12	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> </ul>

## Ports

**Table 4-2011** Ports on the S5736-S24S4XC

Port	Connector Type	Description	Available Components
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s.	<ul style="list-style-type: none"><li>• <b>FE SFP/eSFP optical modules</b></li><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li></ul>

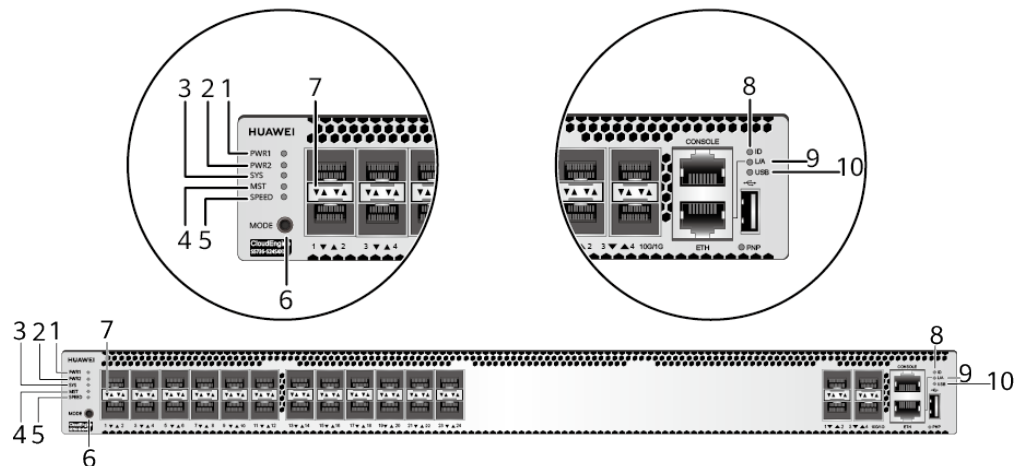
Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

Figure 4-694 Indicators on the S5736-S24S4XC



**Table 4-2012** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in this slot has failed.</li> </ul>
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> <li>• A power module is available in this slot but it is not connected to a power source.</li> <li>• The power module in this slot has failed.</li> </ul>
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.</li> <li>If you are changing the indicator mode: The stack mode is not selected.</li> </ul>
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> <li>If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.</li> <li>If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.</li> </ul>
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.



No.	Indicator	Name	Color	Status	Description
6	MODE	Mode switch button	-	-	<ul style="list-style-type: none"><li>• When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch.</li><li>• When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port.</li><li>• When you press this button a third time, the service port indicators restore to the default mode and show the connection status and link activity of each service port.</li></ul> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED indicator is off.</p> <p><b>NOTE</b></p> <p>Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"><li>• If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:<ul style="list-style-type: none"><li>• If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.</li><li>• If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.</li></ul></li><li>• If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.</li></ul>

No.	Indicator	Name	Color	Status	Description
7	-	Optical service port indicator (two indicators for each port)	Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		Meanings of service port indicators vary in different modes. For details, see <a href="#">Table 4-2013</a> .
8	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
9	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.

No.	Indicator	Name	Color	Status	Description
10	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> <li>No USB flash drive is connected to the switch.</li> <li>The USB port is damaged.</li> <li>The indicator is damaged.</li> <li>The USB flash drive does not have any configuration file and cannot be used for deployment.</li> <li>The switch has been upgraded using the USB flash drive and is restarting.</li> </ul>
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

**Table 4-2013** Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Default mode (LINK indicator)	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
Default mode (ACT indicator)	-	Off	The port is not connected or has been shut down, or no data is transmitted or received.
	Yellow	Blinking	The port is sending or receiving data.
MST stack mode (LINK and ACT indicators)	-	Off	Port indicators do not show the stack ID of the switch.

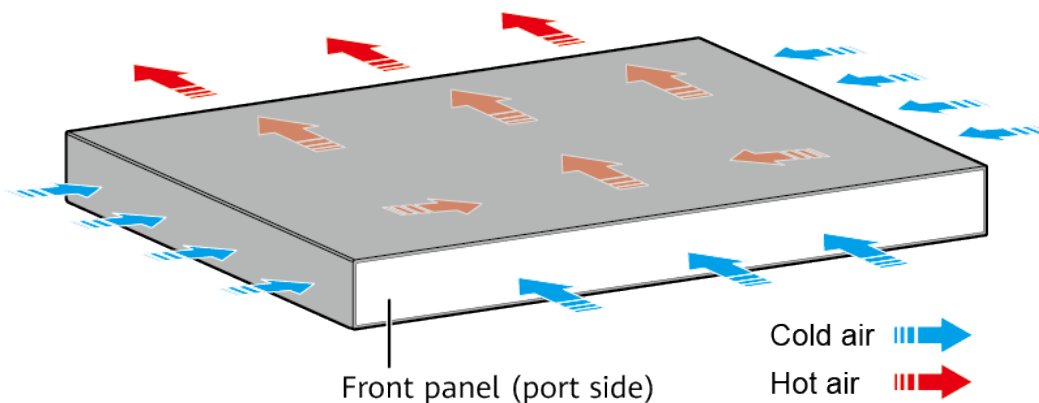
Display Mode	Color	Status	Description
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is steady on, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.</li> </ul>
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> <li>If the indicator of a port is blinking, the number of this port is the stack ID of the switch.</li> <li>If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.</li> </ul>
Speed mode (LINK indicator)	-	Off	The port is not connected or has been shut down.
	Green	Steady on	100M/1000M port: The port is operating at 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.

## Power Supply System

The switch can use a single power module or two power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation System

The switch uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-2014** Technical specifications of the S5736-S24S4XC

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.40 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 444.0 mm (1.72 in. x 17.40 in. x 17.48 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	150mm x 710mm x 560mm (5.90 in. x 27.95 in. x 22.05 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	5.2 kg (11.46 lb)
Weight with packaging [kg(lb)]	8.2 kg (18.08 lb)
Typical power consumption [W]	63 W
Typical heat dissipation [BTU/hour]	214.96 BTU/hour
Maximum power consumption [W]	74 W
Maximum heat dissipation [BTU/hour]	252.5 BTU/hour
Static power consumption [W]	37 W
MTBF [years]	65.79 years
MTTR [hours]	2 hours

Item	Specification
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	49.9 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	37.8 dB(A)
Number of card slots	1
Number of power slots	2
Number of fans modules	2
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC; 50/60 Hz</li> <li>• High-voltage DC input: 240 V DC</li> <li>• DC input: -48 V DC to -60 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC; 45 Hz to 65 Hz</li> <li>High-voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum input current [A]	The current specifications depend on the pluggable power modules in use. For details, see the related power module specifications.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	<ul style="list-style-type: none"> <li>Configured with AC power modules: <math>\pm 6</math> kV in differential mode and <math>\pm 6</math> kV in common mode</li> <li>Configured with DC power modules: <math>\pm 2</math> kV in differential mode and <math>\pm 4</math> kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Pluggable
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left, front and right, air exhaustion from behind
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification



### 4.40.3 S5736-S48S4XC

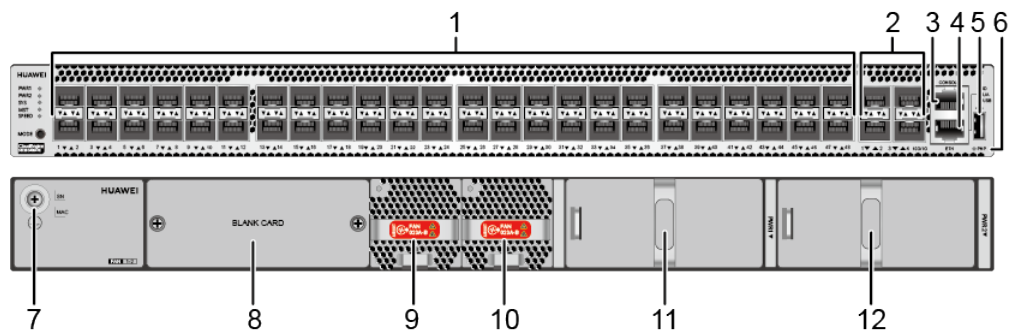
#### Overview

**Table 4-2015** Basic information about the S5736-S48S4XC

Item	Details
Description	S5736-S48S4XC (48*GE SFP ports, 4*10GE SFP+ ports, 1*expansion slot, without power module)
Part Number	98011042
Model	S5736-S48S4XC
First supported version	V200R021C01

#### Components

**Figure 4-695** S5736-S48S4XC appearance



1	Forty-eight 100/1000BASE-X ports	2	Four 10GE SFP+ optical ports
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	<p>Ground screw</p> <p><b>NOTE</b> It is used with a <a href="#">ground cable</a>.</p>	8	<p>Rear card slot</p> <p><b>NOTE</b> Applicable card:</p> <ul style="list-style-type: none"> <li>• <a href="#">S7X08000 (02312URW)</a> (applicable in V200R020C10 and later versions)</li> <li>• <a href="#">S7X08000 (02312URW-002)</a> (applicable in V200R021C10SPC600 and later versions)</li> <li>• <a href="#">E55D21Q02Q00</a></li> <li>• <a href="#">E55D21Q04Q01</a></li> <li>• <a href="#">S7Q02001 (02313UBW)</a> (applicable in V200R021C01 and later versions)</li> <li>• <a href="#">S7Q02001 (02313UBW-002)</a> (applicable in V200R021C10SPC600 and later versions)</li> </ul>
9	<p>Fan module slot 1</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>	10	<p>Fan module slot 2</p> <p><b>NOTE</b> Applicable fan module: <a href="#">7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))</a></p>
11	<p>Power module slot 1</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> </ul>	12	<p>Power module slot 2</p> <p><b>NOTE</b> Applicable power modules:</p> <ul style="list-style-type: none"> <li>• <a href="#">5.20 PAC600S12-CB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.21 PAC600S12-DB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.22 PAC600S12-EB (600 W AC&amp;240 V DC Power Module)</a></li> <li>• <a href="#">5.30 PDC1000S12-DB (1000 W DC Power Module)</a></li> <li>• <a href="#">5.12 PAC150S12-R (150 W AC Power Module)</a></li> <li>• <a href="#">5.15 PDC180S12-CR (180 W DC Power Module)</a></li> </ul>

## Ports

**Table 4-2016** Ports on the S5736-S48S4XC

Port	Connector Type	Description	Available Components
100/1000BASE-X port	SFP	A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s.	<ul style="list-style-type: none"><li>• <b>FE SFP/eSFP optical modules</b></li><li>• <b>GE eSFP optical modules</b></li><li>• <b>GE SFP copper module</b></li></ul>

Port	Connector Type	Description	Available Components
10GE SFP+ optical port	SFP+	A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking)</b></li> </ul>
Console port	RJ45	The console port is connected to a console for on-site configuration.	<b>Console cable</b>

Port	Connector Type	Description	Available Components
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

Port	Connector Type	Description	Available Components
USB port	USB 2.0 Type A	<p>The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.</p> <p>USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.</p>	USB flash drive

## Indicators and Buttons

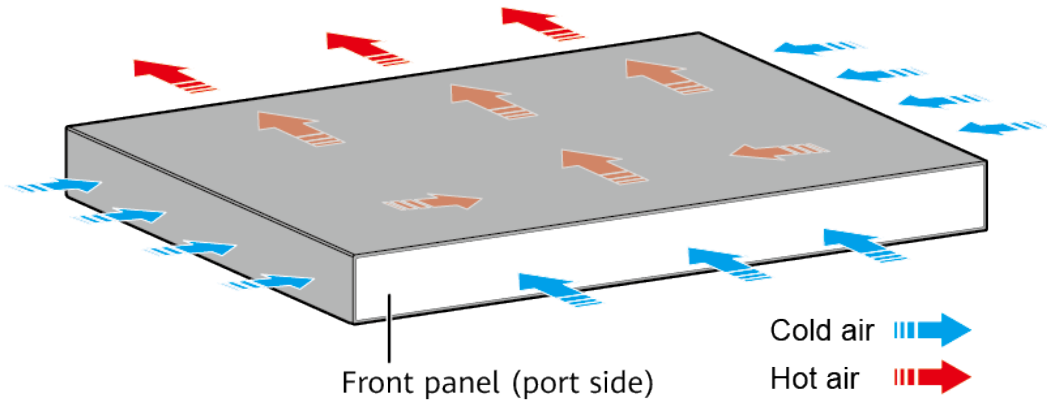
The S5736-S48S4XC has the same types of indicators as the S5736-S24S4XC. For details, see the S5736-S24S4XC.

## Power Supply System

The switch can use a single power module or two power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch. However, the power modules with natural heat dissipation and the power modules with fan cannot be used at the same time.

## Heat Dissipation System

The switch uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-2017** Technical specifications of the S5736-S48S4XC

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.40 in. x 16.54 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 444.0 mm (1.72 in. x 17.40 in. x 17.48 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	150mm x 710mm x 560mm (5.90 in. x 27.95 in. x 22.05 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	5.5 kg (12.13 lb)
Weight with packaging [kg(lb)]	8.6 kg (18.96 lb)
Typical power consumption [W]	87 W
Typical heat dissipation [BTU/hour]	296.85 BTU/hour
Maximum power consumption [W]	100 W
Maximum heat dissipation [BTU/hour]	341.21 BTU/hour
Static power consumption [W]	48 W
MTBF [years]	53.69 years
MTTR [hours]	2 hours

Item	Specification
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	49.9 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	37.8 dB(A)
Number of card slots	1
Number of power slots	2
Number of fans modules	2
Redundant power supply	1+1 Pluggable AC and DC power modules can be used together in the same switch, but power modules that use natural heat dissipation and power modules that use air cooling cannot be used together.
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)



Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The device can work for a short period of time when the operating temperature is beyond the normal range, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The operating temperature can exceed 45°C (113°F) for a maximum of 96 consecutive hours in a year.</li> <li>• The total time when the operating temperature exceeds 45°C (113°F) in a year is less than or equal to 360 hours.</li> <li>• The number of times the operating temperature exceeds 45°C (113°F) is less than or equal to 15 in one year.</li> </ul> <p>If any of the preceding conditions is not met, the device may be damaged or an unknown error may occur.</p> <p>Devices cannot start when the temperature is lower than 0°C (32°F). The maximum transmission distance of an optical module used for short-term operation cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	Pluggable power supply
Rated input voltage [V]	<ul style="list-style-type: none"> <li>• AC input: 100 V AC to 240 V AC, 50/60 Hz</li> <li>• DC input: -48 V DC to -60 V DC</li> </ul>

Item	Specification
Input voltage range [V]	<ul style="list-style-type: none"> <li>AC input: 90 V AC to 290 V AC; 45 Hz to 65 Hz</li> <li>High-voltage DC input: 190 V DC to 290 V DC</li> <li>DC input: -38.4 V DC to -72 V DC</li> </ul>
Maximum input current [A]	The current specifications depend on the pluggable power modules in use. For details, see the related power module specifications.
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	<ul style="list-style-type: none"> <li>Configured with AC power modules: <math>\pm 6</math> kV in differential mode and <math>\pm 6</math> kV in common mode</li> <li>Configured with DC power modules: <math>\pm 2</math> kV in differential mode and <math>\pm 4</math> kV in common mode</li> </ul>
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Pluggable
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left, front and right, air exhaustion from behind
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

## 4.40.4 S5736-S48S4X-A

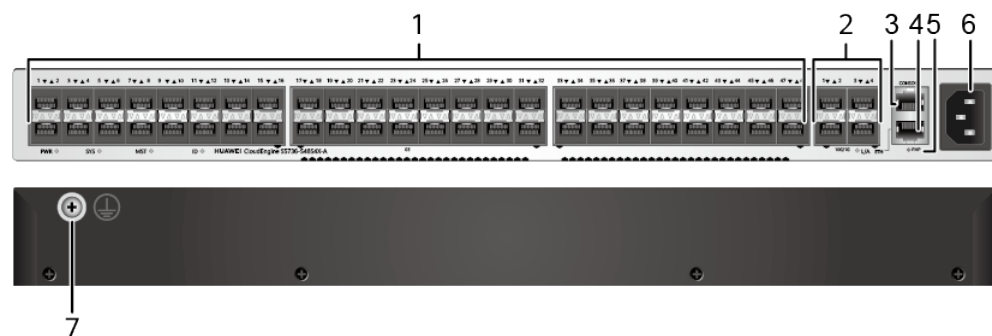
### Overview

**Table 4-2018** Basic information about the S5736-S48S4X-A

Item	Details
Description	S5736-S48S4X-A base (48*GE SFP ports, optional RTU upgrade to 10G, 4*10GE SFP+ ports, AC power supply, front access)
Part Number	98011606
Model	S5736-S48S4X-A
First supported version	V200R020C30

### Components

**Figure 4-696** S5736-S48S4X-A appearance



1	Forty-eight 1000BASE-X ports <b>NOTE</b> A RTU license (L-P1GUPG10G-S57S) can be loaded to increase the port rate to 10 Gbit/s.	2	Four 10GE SFP+ optical ports
3	One console port	4	One ETH management port

5	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	AC socket <b>NOTE</b> It is used with an <a href="#">AC power cable</a> .
7	Ground screw <b>NOTE</b> It is used with a <a href="#">ground cable</a> .	-	-

## Ports

**Table 4-2019** Ports on the S5736-S48S4X-A

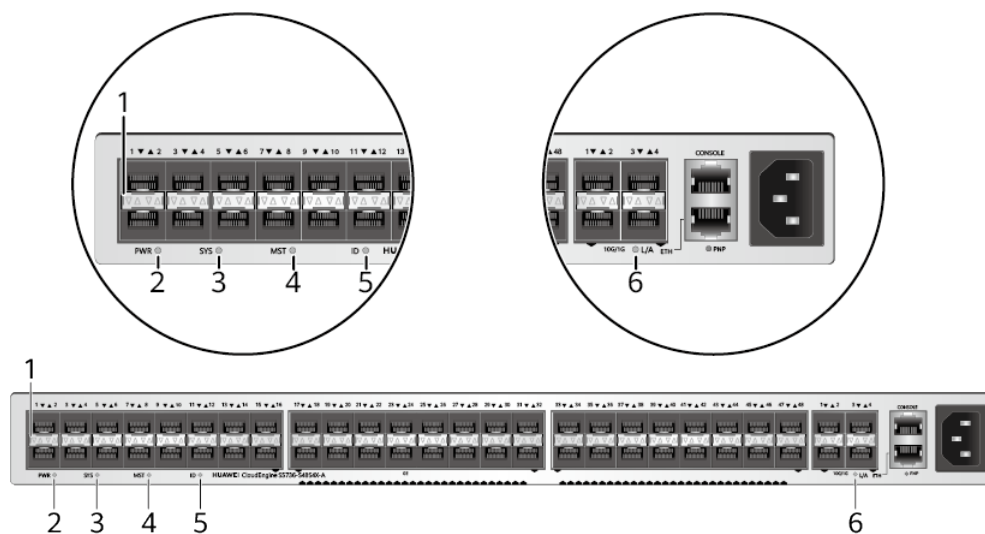
Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	<p>A 1000BASE-X port can send and receive data at 1000 Mbit/s.</p> <p>A license can be loaded to increase the port rate to 10 Gbit/s.</p>	<ul style="list-style-type: none"><li>● <b>GE eSFP optical modules</b></li><li>● <b>GE SFP copper module</b></li><li>● <b>10GE SFP+ optical modules (need a license loaded, OSXD22N00 not supported, and the maximum transmission distance cannot exceed 10 km)</b></li><li>● <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables (need a license loaded)</b></li><li>● <b>3 m and 10 m SFP+ AOC cables (need a license loaded)</b></li><li>● <b>0.5 m and 1.5 m SFP+ dedicated stack cables (need a license loaded, supported by the last 16 ports and used only for zero-</b></li></ul>

Port	Connector Type	Description	Available Components
			<p><b>configuration stacking)</b></p>
<p>10GE SFP+ optical port</p>	<p>SFP+</p>	<p>A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.</p>	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking and not supported after the speed of the first 48 GE ports is increased to 10GE)</b></li> </ul>

Port	Connector Type	Description	Available Components
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

**Figure 4-697** Indicators on the S5736-S48S4X-A



**Table 4-2020** Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	-	Service port indicator	Green	Off	The port is not connected or has been shut down.
				Steady on	A link has been established on the port.
			Yellow	Off	The port is not sending or receiving data.



No.	Indicator	Name	Color	Status	Description
		<p><b>NOTE</b> Each optical port has two single-color indicators. The one on the left is the ACT indicator (yellow), and the one on the right is the LINK indicator (green). Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.</p>		Blinking	The port is sending or receiving data.
2	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

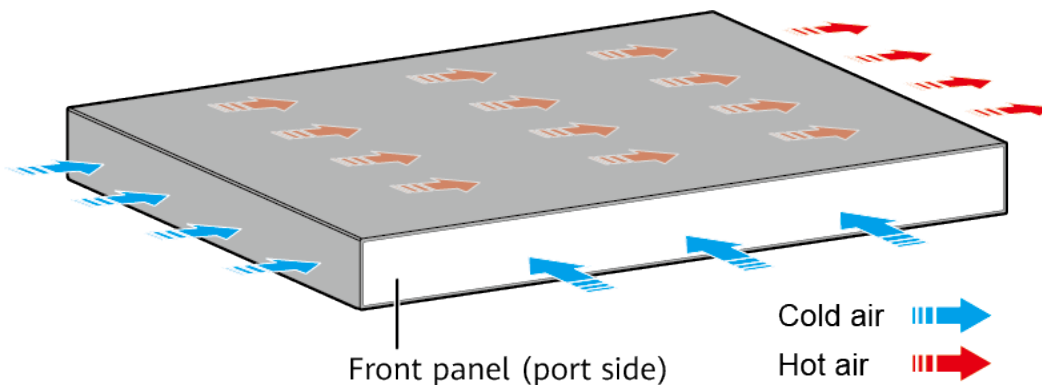
No.	Indicator	Name	Color	Status	Description
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	The switch is not the master switch in a stack.
			Green	Blinking	The switch is the master switch in a stack or a standalone switch.
5	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
6	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The Eth port is sending or receiving data.

## Power Supply System

The switch has a built-in AC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-2021** Technical specifications of the S5736-S48S4X-A

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 228.0 mm (1.72 in. x 17.4 in. x 9.0 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90 mm × 555 mm × 345 mm (3.54 in. x 21.85 in. x 13.58 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.6 kg (7.9 lb)
Weight with packaging [kg(lb)]	4.7 kg (10.36 lb)
Typical power consumption [W]	87 W
Typical heat dissipation [BTU/hour]	296.85 BTU/hour
Maximum power consumption [W]	111 W
Maximum heat dissipation [BTU/hour]	378.74 BTU/hour
Static power consumption [W]	39 W
MTBF [years]	41.97 years
MTTR [hours]	2 hours
Availability	> 0.99999

Item	Specification
Noise at normal temperature (acoustic power) [dB(A)]	56.8 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	44.8 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	3
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"><li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li><li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li><li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li></ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)

Item	Specification
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	AC built-in
Rated input voltage [V]	<ul style="list-style-type: none"><li>AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz</li><li>High-Voltage DC input: 240 V DC</li></ul>
Input voltage range [V]	<ul style="list-style-type: none"><li>AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz</li><li>High-Voltage DC input: 190 V DC to 290 V DC</li></ul>
Maximum input current [A]	6.0 A
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	±6 kV in differential mode, ±6 kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported

Item	Specification
Certification	EMC certification Safety certification Manufacturing certification

## 4.40.5 S5736-S48S4X-D

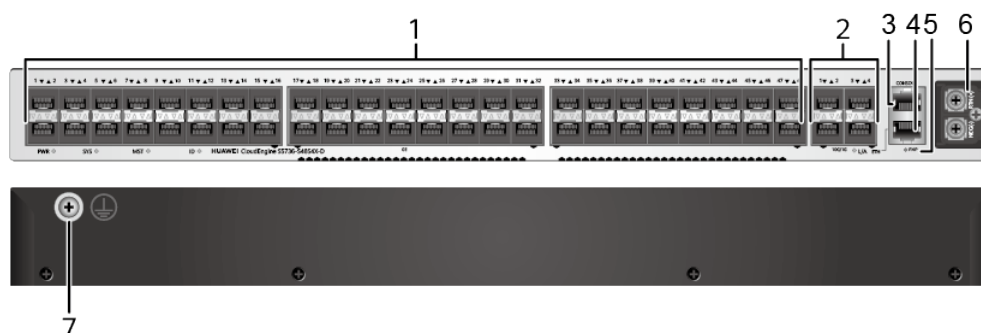
### Overview

**Table 4-2022** Basic information about the S5736-S48S4X-D

Item	Details
Description	S5736-S48S4X-D base (48*GE SFP ports, optional RTU upgrade to 10G, 4*10GE SFP+ ports, DC power supply, front access)
Part Number	98011607
Model	S5736-S48S4X-D
First supported version	V200R020C30

### Components

**Figure 4-698** S5736-S48S4X-D appearance



1	Forty-eight 1000BASE-X ports <b>NOTE</b> A RTU license (L-P1GUPG10G-S57S) can be loaded to increase the port rate to 10 Gbit/s.	2	Four 10GE SFP+ optical ports
---	---	---	------------------------------

3	One console port	4	One ETH management port
5	One PNP button <b>NOTICE</b> To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	DC power terminal <b>NOTE</b> It is used with <b>DC Power Cable</b> .
7	Ground screw <b>NOTE</b> It is used with a <b>ground cable</b> .	-	-

## Ports

**Table 4-2023** Ports on the S5736-S48S4X-D

Port	Connector Type	Description	Available Components
1000BASE-X port	SFP	<p>A 1000BASE-X port can send and receive data at 1000 Mbit/s.</p> <p>A license can be loaded to increase the port rate to 10 Gbit/s.</p>	<ul style="list-style-type: none"> <li>● <b>GE eSFP optical modules</b></li> <li>● <b>GE SFP copper module</b></li> <li>● <b>10GE SFP+ optical modules (need a license loaded, OSXD22N00 not supported, and the maximum transmission distance cannot exceed 10 km)</b></li> <li>● <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables (need a license loaded)</b></li> <li>● <b>3 m and 10 m SFP+ AOC cables (need a license loaded)</b></li> <li>● <b>0.5 m and 1.5 m SFP+ dedicated stack cables (need a license loaded, supported by the last 16 ports and used only for zero-</b></li> </ul>



Port	Connector Type	Description	Available Components
			<p><b>configuration stacking)</b></p>
<p>10GE SFP+ optical port</p>	<p>SFP+</p>	<p>A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s.</p>	<ul style="list-style-type: none"> <li>• <b>GE eSFP optical modules</b></li> <li>• <b>GE-CWDM eSFP optical modules</b></li> <li>• <b>GE-DWDM eSFP optical modules</b></li> <li>• <b>GE SFP copper module</b></li> <li>• <b>10GE SFP+ optical modules (OSXD22N00 not supported)</b></li> <li>• <b>10GE-CWDM SFP+ optical modules</b></li> <li>• <b>10GE-DWDM SFP+ optical modules</b></li> <li>• <b>1 m, 3 m, 5 m, and 10 m SFP + high-speed copper cables</b></li> <li>• <b>3 m and 10 m SFP+ AOC cables</b></li> <li>• <b>0.5 m and 1.5 m SFP+ dedicated stack cables (only for zero-configuration stacking and not supported after the speed of the first 48 GE ports is increased to 10GE)</b></li> </ul>

Port	Connector Type	Description	Available Components
Console port	RJ45	The console port is connected to a console for on-site configuration.	<a href="#">Console cable</a>
ETH management port	RJ45	<p>You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely.</p> <p>You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port.</p>	<a href="#">Ethernet cable</a>

## Indicators and Buttons

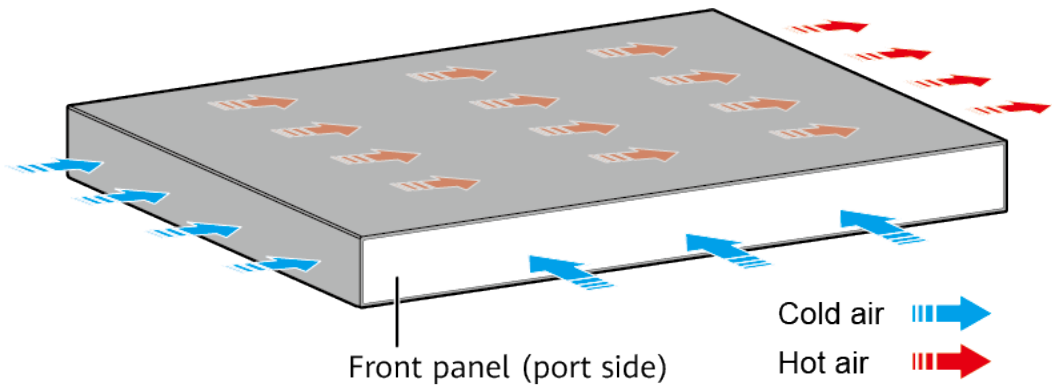
The S5736-S48S4X-D has the same types of indicators as the S5736-S48S4X-A. For details, see the S5736-S48S4X-A.

## Power Supply System

The switch has a built-in DC power module and does not support pluggable power modules.

## Heat Dissipation System

The switch has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

## Technical Specifications

**Table 4-2024** Technical specifications of the S5736-S48S4X-D

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 235.8 mm (1.72 in. x 17.4 in. x 9.3 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90 mm x 555 mm x 345 mm (3.54 in. x 21.85 in. x 13.58 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	3.2 kg (7.1 lb)
Weight with packaging [kg(lb)]	4.3 kg (9.48 lb)
Typical power consumption [W]	87 W
Typical heat dissipation [BTU/hour]	296.85 BTU/hour
Maximum power consumption [W]	108 W
Maximum heat dissipation [BTU/hour]	368.51 BTU/hour
Static power consumption [W]	39 W
MTBF [years]	41.97 years
MTTR [hours]	2 hours
Availability	> 0.99999

Item	Specification
Noise at normal temperature (acoustic power) [dB(A)]	56.8 dB(A)
Noise at normal temperature (acoustic pressure) [dB(A)]	44.8 dB(A)
Number of card slots	0
Number of power slots	0
Number of fans modules	3
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)
Short-term operating temperature [°C(°F)]	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)
Restriction on the operating temperature variation rate [°C(°F)]	<p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> <li>• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.</li> <li>• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year.</li> </ul> <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)

Item	Specification
Long-term operating relative humidity [RH]	5% to 95%, noncondensing
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	DC built-in
Rated input voltage [V]	-48 V DC to -60 V DC
Input voltage range [V]	-38.4 V DC to -72 V DC
Maximum input current [A]	6.0 A
Memory	2 GB
Flash memory	1 GB in total. To view the available flash memory size, run the display version command.
Console port	RJ45
Eth Management port	RJ45
USB	Not supported
RTC	Supported
RPS input	Not supported
Service port surge protection [kV]	-
Power supply surge protection [kV]	±2 kV in differential mode, ±4 kV in common mode
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	Built-in
Heat dissipation mode	Heat dissipation with fan, intelligent fan speed adjustment
Airflow direction	Air intake from left and front, air exhaustion from right
PoE	Not supported
Certification	EMC certification Safety certification Manufacturing certification

# 5 Power Modules

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## NOTICE

- All power modules (except the 870 W PoE power module) are hot swappable, but it is highly recommended that you power off a switch before removing or installing a power module in the switch to protect personal and equipment safety.
- Before replacing a power module in a switch, make sure that the switch can be powered by the other power module after the power module is removed. Otherwise, services on the switches will be interrupted by a power failure when the power module is removed.
- Before powering off a switch, shut down all of its power supply units.
- A switch can only use power modules matching its chassis model. Using unsupported power modules will cause unexpected risks.
- If a switch has two power modules for 1+1 power redundancy and one of them is powered off, the indicator of this power module will not turn off immediately. This is a normal situation.
- If the total power of powered devices (PDs) connected to a PoE switch exceeds the rated PoE power of a single power module in the switch, the switch does not support 1+1 redundancy of the PoE power modules. If you need to power off one power module, limit the total power of PDs within the PoE power that one power module can provide.

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[5.1 PAC-60WA-L \(60 W AC Power Module\)](#)

[5.2 LS5M100PWA00/ES0W2PSA0150 \(150 W AC Power Module\)](#)

[5.3 LS5M100PWD00/ES0W2PSD0150 \(150 W DC Power Module\)](#)

[5.4 PAC-350WA-B \(350 W AC Power Module\)](#)

[5.5 W0PSA2500 \(250 W AC PoE Power Module\)](#)

[5.6 W0PSA5000/PAC-500WA-BE \(500 W AC PoE Power Module\)](#)

[5.7 W2PSA0580 \(580 W AC PoE Power Module\)](#)

[5.8 PDC-650WA-BE \(650 W DC PoE Power Module\)](#)

- 5.9 PAC1000D5412 (1000 W AC PoE Power Module)
- 5.10 W2PSA1150 (1150 W AC PoE Power Module)
- 5.11 PAC60S12-AR (60 W AC&240 V DC Power Module)
- 5.12 PAC150S12-R (150 W AC Power Module)
- 5.13 W0PSA1701 (170 W AC Power Module)
- 5.14 ES5M0PSD1700 (170 W DC Power Module)
- 5.15 PDC180S12-CR (180 W DC Power Module)
- 5.16 PAC240S56-CN (240 W PoE AC&HVDC Power Module)
- 5.17 PAC-260WA-E (260 W AC Power Module)
- 5.18 PDC-350WA-B (350 W DC Power Module)
- 5.19 PAC-600WA-B (600 W AC Power Module)
- 5.20 PAC600S12-CB (600 W AC&240 V DC Power Module)
- 5.21 PAC600S12-DB (600 W AC&240 V DC Power Module)
- 5.22 PAC600S12-EB (600 W AC&240 V DC Power Module)
- 5.23 PAC600S56-CB (600 W PoE AC&240 V DC Power Module (Back to Front, Power panel side exhaust))
- 5.24 PAC600S56-EB (600 W PoE AC&240 V DC Power Module (66mm Width Case, Back to Front, Power panel side exhaust))
- 5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&240 V DC Power Module)
- 5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&240 V DC Power Module)
- 5.27 PAC1000S56-DB (1000 W PoE AC&240 V DC Power Module)
- 5.28 PAC1000S56-EB (1000 W PoE AC&240 V DC Power Module (66 mm Width Case, Back to Front, Power panel side exhaust))
- 5.29 PDC1000S56-CB (1000 W PoE DC Power Module)
- 5.30 PDC1000S12-DB (1000 W DC Power Module)
- 5.31 PDC1000S56-EB (1000 W PoE DC Power Module (66 mm Width case, Back to Front, Power panel side exhaust))
- 5.32 HW-560268D0D (150 W PoE AC Power Adapter)
- 5.33 RPS1800 Redundant Power Supply (6 DC Output Ports, 12V Total Output Power 140W, 48V Total Output Power 1600W)
- 5.34 LS5W2PSA0870 (870 W PoE Power Module, Rectifier 15 A)

## 5.1 PAC-60WA-L (60 W AC Power Module)

## Product Support

**Table 5-1** lists the switch models supporting a 60 W AC power module.

**Table 5-1** Product support for a 60 W AC power module

Power Module Name	Product Support
PAC-60WA-L	S5721-28X-SI-24S-AC, S5720-28P-SI-AC, S5720-52P-SI-AC, S5720-28X-SI-AC, S5720-28X-SI-DC, S5720-52X-SI-AC, S5720-52X-SI-DC

## Appearance

**Figure 5-1** Appearance of a 60 W AC power module



## Function

**Table 5-2** describes the functions of a 60 W AC power module.

**Table 5-2** Functions of a 60 W AC power module

Function	Description
Input protection	Provides protection against input undervoltage condition.
Output protection	Provides protection against output undervoltage, output overvoltage, output overcurrent, and output short circuit conditions.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold (70°C or 158°F), the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.



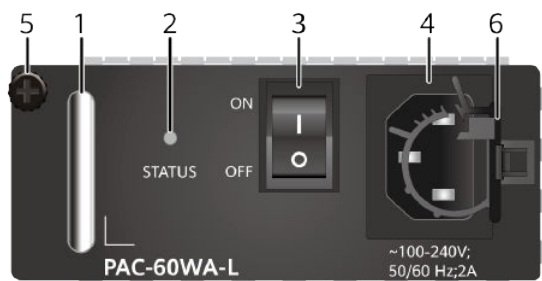
Function	Description
Surge protection	-
Hot swapping	Supported

 **NOTE**

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Panel

**Figure 5-2** Panel of a 60 W AC power module



1. Handle	2. Indicator	3. Power switch	4. AC power socket
5. Captive screw	6. AC power cable locking strap	-	-

**Table 5-3** describes the indicator on the 60 W AC power module panel.

**Table 5-3** Indicator on the 60 W AC power module panel

Indicator	Color	Description
STATUS	Green	Off: <ul style="list-style-type: none"> <li>The power input is abnormal (no input, overvoltage, or undervoltage).</li> <li>The power output is abnormal (undervoltage or overtemperature).</li> </ul> Steady on: The AC power input is normal.

## Specifications

**Table 5-4** lists technical specifications of a 60 W AC power module.

**Table 5-4** Technical specifications of a 60 W AC power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.8 kg (1.76 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current	2 A
Maximum output current	5 A
Rated output voltage	12 V
Maximum output power	60 W
Part number	98010653

## 5.2 LS5M100PWA00/ES0W2PSA0150 (150 W AC Power Module)

### Product Support

**Table 5-5** lists the switch models supporting a 150 W AC power module.

**Table 5-5** Product support for a 150 W AC power module

Power Module Name	Product Support
LS5M100PWA00 (purple gray)	S5700-28C-EI, S5700-28C-EI-24S, S5700-52C-EI, S5700-28C-SI, S5700-52C-SI, S5710-28C-LI, S5710-52C-LI

Power Module Name	Product Support
ES0W2PSA0150 (black)	S5700-28P-LI-BAT, S5700-28P-LI-24S-BAT, S5710-28C-EI, S5710-52C-EI, S5720-28P-SI-AC, S5720-28X-SI-AC, S5720-28X-SI-DC, S5720-52P-SI-AC, S5720-52X-SI-AC, S5720-52X-SI-DC, S5720-36C-EI-AC, S5720-36C-EI-DC, S5720-56C-EI-AC, S5720-56C-EI-DC, S5720-36C-EI-28S-AC, S5720-36C-EI-28S-DC, S5720-56C-EI-48S-AC, S5720-56C-EI-48S-DC, S5720-36PC-EI-AC, S5720-56PC-EI-AC, S5730-48C-SI-AC, S5730-68C-SI-AC, S5730S-48C-EI-AC, S5730S-68C-EI-AC, S5730-36C-HI, S5730-44C-HI, S5730-60C-HI, S5730-68C-HI, S5730-44C-HI-24S, S5730-36C-HI-24S, S5720-52X-SI-48S

## Appearance

**Figure 5-3** Appearance of a 150 W AC power module (LS5M100PWA00)



**Figure 5-4** Appearance of a 150 W AC power module (ES0W2PSA0150)



## Function

**Table 5-6** describes the functions of a 150 W AC power module.

**Table 5-6** Functions of a 150 W AC power module

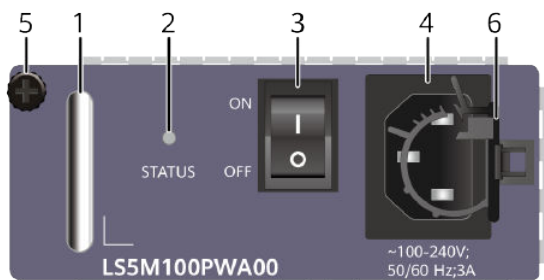
Function	Description
Input protection	Input undervoltage and overvoltage protection is provided.
Output protection	Output undervoltage, overvoltage, overcurrent, and short-circuit protection is provided.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold (70°C), the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Surge protection	-
Hot swapping	Supported

**NOTE**

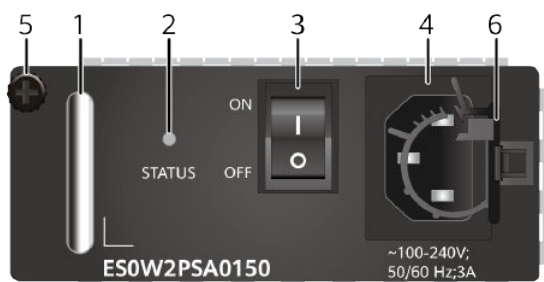
When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

**Panel Description**

**Figure 5-5** Panel of a 150 W AC power module (LS5M100PWA00)



**Figure 5-6** Panel of a 150 W AC power module (ES0W2PSA0150)



1. Handle	2. Power status indicator	3. Power switch	4. AC power socket
5. Captive screw	6. AC power cable locking strap	-	-

**Table 5-7** describes the indicator on the 150 W AC power module panel.

**Table 5-7** Description of the indicator on the 150 W AC power module panel

Indicator	Color	Description
STATUS	Green	<p>Off:</p> <ul style="list-style-type: none"> <li>The input power is out of range, for example, no AC input power, AC input overvoltage, or AC input undervoltage.</li> <li>The output power is out of range, for example, undervoltage or overtemperature occurs.</li> </ul> <p>Steady on: The AC power input is in the normal range.</p> <p>Blinking: The output power is out of range, for example, overvoltage, overcurrent, or short circuit occurs.</p>

## Specifications

**Table 5-8** describes technical specifications of a 150 W AC power module.

**Table 5-8** Technical specifications of a 150 W AC power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.8 kg (1.76 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current	3 A
Maximum output current	12.5 A

Item	Description
Rated output voltage	12 V
Maximum output power	150 W
Part number	LS5M100PWA00: 02316783 ES0W2PSA0150: 02310JFA

## 5.3 LS5M100PWD00/ES0W2PSD0150 (150 W DC Power Module)

### Product Support

[Table 5-9](#) lists switch models supporting a 150 W DC power module.

**Table 5-9** Product support for a 150 W DC power module

Power Module Name	Product Support
LS5M100PWD00 (purple gray)	S5700-28C-EI, S5700-28C-EI-24S, S5700-52C-EI, S5700-28C-SI, S5700-52C-SI, S5710-28C-LI, S5710-52C-LI
ES0W2PSD0150 (black)	S5700-28P-LI-BAT, S5700-28P-LI-24S-BAT, S5710-28C-EI, S5710-52C-EI, S5720-28P-SI-AC, S5720-28X-SI-AC, S5720-28X-SI-DC, S5720-52P-SI-AC, S5720-52X-SI-AC, S5720-52X-SI-DC, S5721-28X-SI-24S-AC, S5720-36C-EI-AC, S5720-36C-EI-DC, S5720-56C-EI-AC, S5720-56C-EI-DC, S5720-36C-EI-28S-AC, S5720-36C-EI-28S-DC, S5720-56C-EI-48S-AC, S5720-56C-EI-48S-DC, S5720-36PC-EI-AC, S5720-56PC-EI-AC, S5730-48C-SI-AC, S5730-68C-SI-AC, S5730S-48C-EI-AC, S5730S-68C-EI-AC, S5730-36C-HI, S5730-44C-HI, S5730-60C-HI, S5730-68C-HI, S5730-44C-HI-24S, S5730-36C-HI-24S, S5720-52X-SI-48S

## Appearance

**Figure 5-7** Appearance of a 150 W DC power module (LS5M100PWD00)



**Figure 5-8** Appearance of a 150 W DC power module (ES0W2PSD0150)



## Function

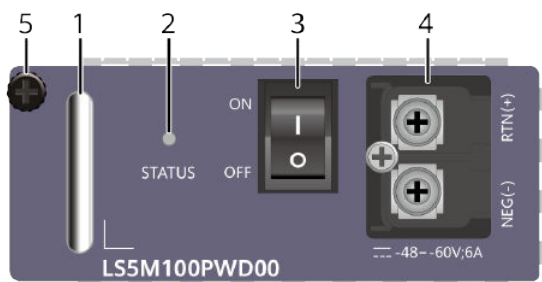
**Table 5-10** describes the functions of a 150 W DC power module.

**Table 5-10** Functions of a 150 W DC power module

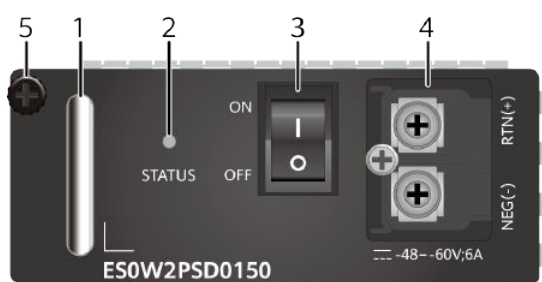
Function	Description
Alarm function	Alarms for various power supply events, such as no power input, air breaker status, ineffective surge protection, and input undervoltage are supported.
Short circuit	-
Surge protection	-
Hot swapping	Supported

## Panel Description

**Figure 5-9** Panel of a 150 W DC power module (LS5M100PWD00)



**Figure 5-10** Panel of a 150 W DC power module (ES0W2PSD0150)



1. Handle	2. Power status indicator	3. Power switch	4. DC power terminal	5. Captive screw
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**Table 5-11** describes indicators on a 150 W DC power module panel.

**Table 5-11** Description of indicators on a 150 W DC power module panel

Indicator	Color	Description
STATUS	Green	<p>Off:</p> <ul style="list-style-type: none"> <li>The input power is out of range, for example, no DC input power, DC input overvoltage, or DC input undervoltage.</li> <li>The output power is out of range, for example, undervoltage or overtemperature occurs.</li> </ul> <p>Steady on: The DC power input is in the normal range.</p> <p>Blinking: The output power is out of range, for example, overvoltage, overcurrent, or short circuit occurs.</p>



## Specifications

**Table 5-12** describes technical specifications of a 150 W DC power module.

**Table 5-12** Technical specifications of a 150 W DC power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.8 kg (1.76 lb)
Rated input voltage range	-48 V DC to -60 V DC
Maximum input voltage range	-36 V DC to -72 V DC
Maximum input current	6 A
Maximum output current	12.5 A
Rated output voltage	12 V
Maximum output power	150 W
Part number	LS5M100PWD00: 02316784 ES0W2PSD0150: 02310JFD

## 5.4 PAC-350WA-B (350 W AC Power Module)

### Version Mapping

**Table 5-13** lists the switch models supporting a 350 W AC power module.

**Table 5-13** Product support for a 350 W AC power module

Power Module Name	Product Support
PAC-350WA-B	S5710-108C-PWR-HI

## Appearance

**Figure 5-11** Appearance of a 350 W AC power module



## Function

**Table 5-14** describes the functions of a 350 W AC power module.

**Table 5-14** Functions of a 350 W AC power module

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically start supplying power again when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the system recovers from output overvoltage, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.

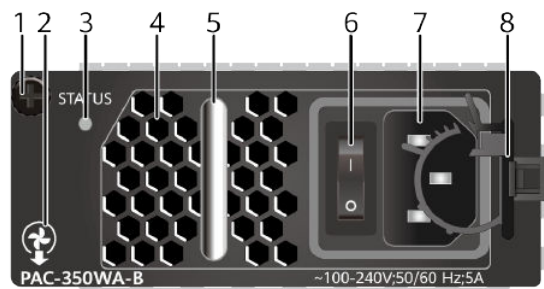
Function	Description
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

 **NOTE**

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Panel

**Figure 5-12** Panel of a 350 W AC power module



1. Captive screw	2: Airflow flag (air out)	3. Indicator	4. Fan air vent
5. Handle	6. Power switch	7. AC power socket	8. AC power cable locking strap

**Table 5-15** describes the indicator on the 350 W AC power module panel.

**Table 5-15** Description of the indicator on the 350 W AC power module panel

Indicator	Color	Description
STATUS	Green	Off: The AC power input is abnormal (for example, no input, overvoltage, or undervoltage) or AC power output is abnormal (for example, overvoltage, overcurrent, short-circuit, or overtemperature). Steady on: The power module is working properly.

## Specifications

**Table 5-16** lists specifications of a 350 W AC power module.

**Table 5-16** Specifications of a 350 W AC power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.918 kg (2.02 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage	90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current	5 A
Maximum output current	29.17 A
Rated output voltage	12 V
Maximum output power	350 W
Part number	02130971

## 5.5 W0PSA2500 (250 W AC PoE Power Module)

### Product Support

**Table 5-17** lists the switch models supporting a 250 W AC PoE power module.

**Table 5-17** Product support for a 250 W AC PoE power module

Power Module Name	Product Support
W0PSA2500	S5700-28C-PWR-EI, S5700-52C-PWR-EI, S5700-28C-PWR-SI, S5700-52C-PWR-SI, S5700-24TP-PWR-SI, S5700-48TP-PWR-SI, S5710-28C-PWR-LI, S5710-52C-PWR-LI

## Appearance

**Figure 5-13** Appearance of the 250 W AC PoE power module



## Function

**Table 5-18** describes the functions of a 250 W AC PoE power module.

**Table 5-18** Functions of a 250 W AC PoE power module

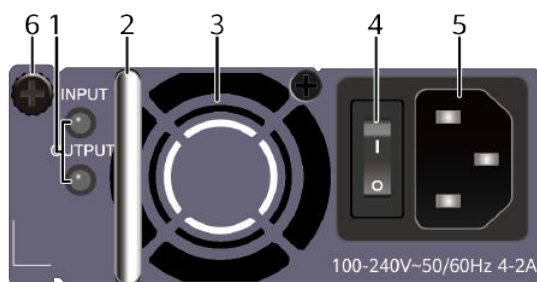
Function	Description
PoE power supply	Complying with IEEE 802.3af and IEEE 802.3at, the PoE power module is able to remotely provide power for the devices of different vendors. IEEE 802.3af supports a maximum of 15.4 W power and IEEE 802.3at supports a maximum of 30 W power.
Input protection	Input overcurrent and undervoltage protection is provided.
Output protection	Output undervoltage, overvoltage, overcurrent, and short-circuit protection is provided.
Overtemperature protection	-
Surge protection	-
Hot swapping	Supported

### NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Panel Description

**Figure 5-14** Panel of a 250 W AC PoE power module



1. Power status indicator	2. Handle	3. Fan	4. Switch
5. AC power socket	6. Captive screw	-	-

**Table 5-19** describes indicators on a 250 W AC PoE power module panel.

**Table 5-19** Description of indicators on a 250 W AC PoE power module panel

Indicator	Color	Description
INPUT	-	Off: The power module receives no input power.
	Green	Steady on: The AC input power is in the normal range.
	Red	Steady on: The AC input power is out of range, for example, undervoltage or overvoltage.
OUTPUT	-	Off: The power module has no output power.
	Green	Steady on: The AC output power is in the normal range.
	Red	Steady on: The power output is out of range. <ul style="list-style-type: none"> <li>Abnormal power fan operation</li> <li>Output overvoltage</li> <li>Output overcurrent</li> <li>Short circuit</li> <li>Overtemperature</li> </ul>

## Specifications

**Table 5-20** describes technical specifications of a 250 W AC PoE power module.

**Table 5-20** Technical specifications of a 250 W AC PoE power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.8 kg (1.76 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Input current	4 A to 2 A
Maximum output current	<ul style="list-style-type: none"> <li>● +12 V: 10 A</li> <li>● -53.5 V: 2.5 A</li> </ul>
Maximum output power	<ul style="list-style-type: none"> <li>● PoE: 130 W</li> <li>● Total: 250 W</li> </ul>
Part number	02130878

## 5.6 W0PSA5000/PAC-500WA-BE (500 W AC PoE Power Module)

### Product Support

**Table 5-21** lists the switch models supporting a 500 W AC PoE power modules.

**Table 5-21** Product support for a 500 W AC PoE power module

Power Module Name	Product Support
W0PSA5000 (purple gray)	S5700-28C-PWR-EI, S5700-52C-PWR-EI, S5700-28C-PWR-SI, S5700-52C-PWR-SI, S5700-24TP-PWR-SI, S5700-48TP-PWR-SI, S5710-28C-PWR-LI, S5710-52C-PWR-LI
PAC-500WA-BE (black)	S5720-28X-PWR-SI-AC, S5720-28X-PWR-SI-DC, S5720-52X-PWR-SI-AC, S5720-52X-PWR-SI-DC, S5720-36C-PWR-EI-AC, S5720-36C-PWR-EI-DC, S5720-56C-PWR-EI-DC, S5720-56C-PWR-EI-AC, S5730-48C-PWR-SI-AC, S5730S-48C-PWR-EI, S5730-68C-PWR-SI-AC, S5730-68C-PWR-SI, S5730S-68C-PWR-EI, S5730-36C-PWH-HI, S5730-44C-PWH-HI, S5730-60C-PWH-HI, S5730-68C-PWH-HI

## Appearance

**Figure 5-15** Appearance of a 500 W AC PoE power module (W0PSA5000)



**Figure 5-16** Appearance of a 500 W AC PoE power module (PAC-500WA-BE)



## Function

**Table 5-22** describes the functions of a 500 W AC PoE power module.

**Table 5-22** Functions of a 500 W AC PoE power module

Function	Description
PoE power supply	Complying with IEEE 802.3af and IEEE 802.3at, the PoE power module is able to remotely provide power for the devices of different vendors. IEEE 802.3af supports a maximum of 15.4 W power and IEEE 802.3at supports a maximum of 30 W power.
Input protection	Input overcurrent and undervoltage protection is provided.
Output protection	Output undervoltage, overvoltage, overcurrent, and short-circuit protection is provided.



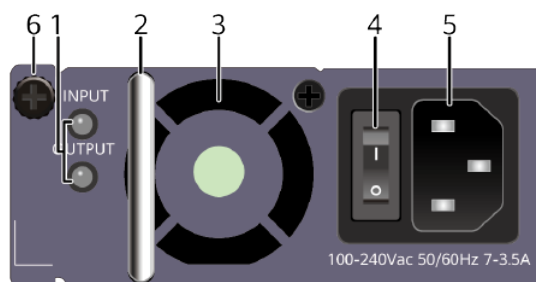
Function	Description
Overtemperature protection	-
Surge protection	-
Hot swapping	Supported

**NOTE**

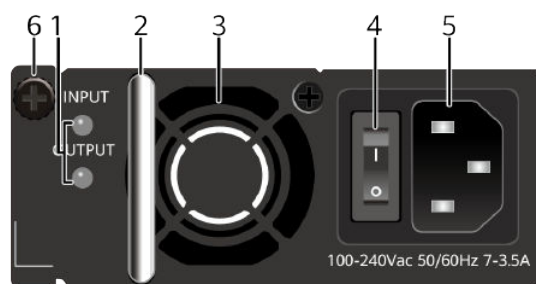
When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

### Panel Description

**Figure 5-17** Panel of a 500 W AC PoE power module (W0PSA5000)



**Figure 5-18** Panel of a 500 W AC PoE power module (PAC-500WA-BE)



1. Power status indicator	2. Handle	3. Fan	4. Switch
5. AC power socket	6. Captive screw	-	-

**Table 5-23** describes indicators on a 500 W AC PoE power module panel.

**Table 5-23** Description of indicators on a 500 W AC PoE power module panel

Indicator	Color	Description
INPUT	-	Off: The power module receives no input power.
	Green	Steady on: The AC input power is in the normal range.
	Red	Steady on: The AC input power is out of range, for example, undervoltage or overvoltage.
OUTPUT	-	Off: The power module has no output power.
	Green	Steady on: The AC output power is in the normal range.
	Red	Steady on: The power output is out of range. <ul style="list-style-type: none"> <li>● Abnormal power fan operation</li> <li>● Output overvoltage</li> <li>● Output overcurrent</li> <li>● Short circuit</li> <li>● Overtemperature</li> </ul>

## Specifications

**Table 5-24** describes technical specifications of a 500 W AC PoE power module.

**Table 5-24** Technical specifications of a 500 W AC PoE power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	1.06 kg (2.34 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current	7 A to 3.5 A
Maximum output current	<ul style="list-style-type: none"> <li>● +12 V: 10 A</li> <li>● -53.5 V: 7.11 A</li> </ul>
Maximum output power	<ul style="list-style-type: none"> <li>● +12 V: 120 W</li> <li>● -53.5 V: 380 W (PoE: 369.6 W)</li> </ul>

Item	Description
Part number	W0PSA5000: 02130879 PAC-500WA-BE: 02311BXV

## 5.7 W2PSA0580 (580 W AC PoE Power Module)

### Product Support

[Table 5-25](#) lists the switch models supporting a 580 W AC PoE power module.

**Table 5-25** Product support for a 580 W AC PoE power module

Power Module Name	Product Support
W2PSA0580	S5710-52C-PWR-EI, S5710-28C-PWR-EI-AC, S5710-52C-PWR-EI-AC, S5720-56C-PWR-HI-AC1

### Appearance

**Figure 5-19** Appearance of the 580 W AC PoE power module



### Function

[Table 5-26](#) describes the functions of a 580 W AC PoE power module.

**Table 5-26** Functions of a 580 W AC PoE power module

Function	Description
PoE power supply	Provides a maximum of 369.6 W PoE power.

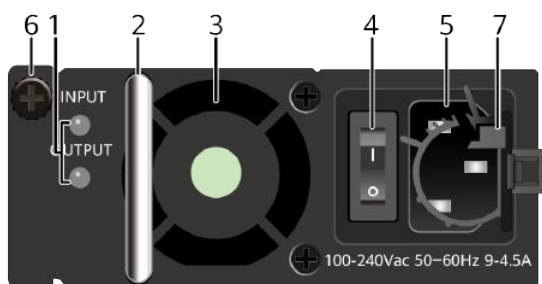
Function	Description
Input protection	Input overcurrent and undervoltage protection is provided.
Output protection	Output overvoltage, overcurrent, and short-circuit protection is provided.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold (75°C), the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

**NOTE**

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Panel Description

**Figure 5-20** Panel of a 580 W AC PoE power module



1. Power status indicator	2. Handle	3. Fan	4. Switch
5. AC power socket	6. Captive screw	7. AC power cable locking strap	-

**Table 5-27** describes indicators on a 580 W AC PoE power module panel.

**Table 5-27** Description of indicators on a 580 W AC PoE power module panel

Indicator	Color	Description
INPUT	-	Off: The power module receives no input power.

Indicator	Color	Description
	Green	Steady on: The AC input power is in the normal range.
	Red	Steady on: The AC input power is out of range, for example, undervoltage or overvoltage.
OUTPUT	-	Off: The power module has no output power.
	Green	Steady on: The AC output power is in the normal range.
	Red	Steady on: The power output is out of range. <ul style="list-style-type: none"> <li>● Abnormal power fan operation</li> <li>● Output overvoltage</li> <li>● Output overcurrent</li> <li>● Short circuit</li> <li>● Overtemperature</li> </ul>

## Specifications

**Table 5-28** describes technical specifications of a 580 W AC PoE power module.

**Table 5-28** Technical specifications of a 580 W AC PoE power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	< 1.6 kg (3.53 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage range	90 V AC to 290 V AC, 47 Hz to 63 Hz
Input current	9 A to 4.5 A
Maximum output current	<ul style="list-style-type: none"> <li>● +12 V: 16.66 A</li> <li>● -53.5 V: 7.11 A</li> </ul>
Maximum output power	<ul style="list-style-type: none"> <li>● PoE: 369.6 W</li> <li>● Total: 580 W</li> </ul>
Part number	02130953

## 5.8 PDC-650WA-BE (650 W DC PoE Power Module)

### Product Support

**Table 5-29** lists the switch models supporting a 650 W DC PoE power module.

**Table 5-29** Product support for a 650 W DC PoE power module

Power Module Name	Product Support
PDC-650WA-BE	S5720-28X-PWR-SI-AC, S5720-28X-PWR-SI-DC, S5720-52X-PWR-SI-AC, S5720-52X-PWR-SI-DC, S5720-36C-PWR-EI-AC, S5720-36C-PWR-EI-DC, S5720-56C-PWR-EI-AC, S5720-56C-PWR-EI-DC, S5730-48C-PWR-SI-AC, S5730S-48C-PWR-EI, S5730-68C-PWR-SI-AC, S5730-68C-PWR-SI, S5730S-68C-PWR-EI, S5730-36C-PWH-HI, S5730-44C-PWH-HI, S5730-60C-PWH-HI, S5730-68C-PWH-HI

### Appearance

**Figure 5-21** Appearance of a 650 W DC PoE power module (PDC-650WA-BE)



### Function

**Table 5-30** describes the functions of a 650 W DC PoE power module.

**Table 5-30** Functions of a 650 W DC PoE power module

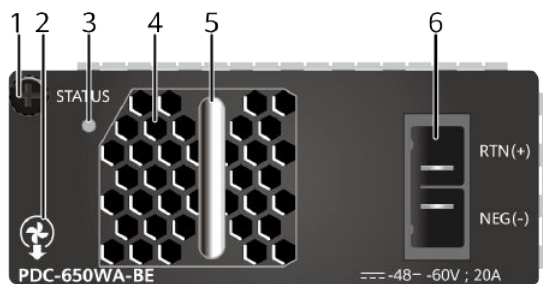
Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically start supplying power again when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the system recovers from output overvoltage, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

 **NOTE**

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Panel

**Figure 5-22** Panel of a 650 W DC PoE power module (PDC-650WA-BE)



1. Captive screw	2: Airflow flag (air out)	3. Indicator	4. Fan air vent
5. Handle	6. DC power socket	-	-

**Table 5-31** describes the indicator on the 650 W DC PoE power module panel.

**Table 5-31** Description of indicator on the 650 W DC PoE power module panel

Indicator	Color	Description
STATUS: running status indicator	Green	<ul style="list-style-type: none"> <li>Off: The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overvoltage, overcurrent, short-circuit, or overtemperature).</li> <li>Steady on: The power module is working normally.</li> </ul>

## Specifications

**Table 5-32** describes technical specifications of a 650 W DC PoE power module.

**Table 5-32** Technical specifications of a 650 W DC PoE power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.83 kg (1.83 lb)
Rated input voltage range	-48 V DC to -60 V DC



Item	Description
Maximum input voltage	-38.4 V DC to -72 V DC
Maximum input current	20 A
Maximum output current	<ul style="list-style-type: none"> <li>+12 V: 22.5 A</li> <li>-53.5 V: 7.11 A</li> </ul>
Rated output power	<ul style="list-style-type: none"> <li>PoE power: 369.6 W</li> <li>Total power: 650 W</li> </ul>
Part number	02270152

## 5.9 PAC1000D5412 (1000 W AC PoE Power Module)

### Product Support

[Table 5-33](#) lists the switch models supporting a 1000 W AC PoE power module.

**Table 5-33** Product support for a 1000 W AC PoE power module

Power Module Name	Product Support
PAC1000D5412	S5720-52X-PWR-SI-ACF, S5730-68C-PWR-SI, S5730S-68C-PWR-EI, S5720-56C-PWR-EI-AC1, S5730-36C-PWH-HI, S5730-44C-PWH-HI, S5730-60C-PWH-HI, S5730-68C-PWH-HI

### Appearance

**Figure 5-23** Appearance of a 1000 W AC PoE power module



## Functions

**Table 5-34** describes the functions of a 1000 W AC PoE power module.

**Table 5-34** Functions of a 1000 W AC PoE power module

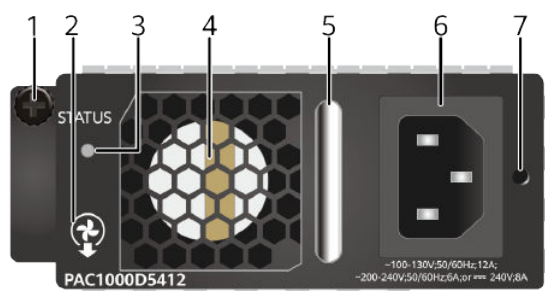
Function	Description
PoE power supply	Provides a maximum of 754.6 W PoE power.
Input protection	Provides protection against input overvoltage and input undervoltage.
Output protection	Provides protection against output overvoltage, output overcurrent, and output short-circuit.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold (80°C or 176°F), the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

### NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Panel

**Figure 5-24** Panel of a 1000 W AC PoE power module



1. Captive screw	2. Airflow flag (air out)	3. Indicator	4. Fan
5. Handle	6. AC power socket	7. AC power cable locking strap	-

**Table 5-35** describes indicators on a 1000 W AC PoE power module.

**Table 5-35** Description of indicator on a 1000 W AC PoE power module

Indicator	Color	Description
STATUS	Green	Off: <ul style="list-style-type: none"><li>• The AC power input is abnormal, for example, no AC input power, AC input overvoltage, or AC input undervoltage occurs.</li><li>• The AC power output is abnormal, for example, output undervoltage or overtemperature occurs.</li></ul> Steady on: The AC power input is in normal range.

## Specifications

**Table 5-36** lists the specifications of a 1000 W AC PoE power module.

**Table 5-36** Specifications of a 1000 W AC PoE power module

Item	Description
Dimensions (H x W x D)	42 mm x 99 mm x 204 mm (1.7 in. x 3.9 in. x 8.0 in.)
Weight	1.1 kg (2.43 lb)
Rated input voltage range	100 V AC to 130 V AC, 50/60 Hz 200 V AC to 240 V AC, 50/60 Hz 240 V DC
Maximum input voltage range	90 V AC to 290 V AC, 47 Hz to 63 Hz 190 V DC to 290 V DC
Input current	100 V AC to 130 V AC: 12 A 200 V AC to 240 V AC: 6 A 240 V DC: 8 A
Maximum output current	<ul style="list-style-type: none"><li>• 12 V: 20.84 A</li><li>• 53.5 V: 14.58 A</li><li>• 56 V: 13.93 A</li></ul>

Item	Description
Maximum output power	100 V AC to 130 V AC input: <ul style="list-style-type: none"> <li>PoE: 754.6 W</li> <li>Total: 900 W</li> </ul> 200 V AC to 240 V AC input and 240 V DC input: <ul style="list-style-type: none"> <li>PoE: 754.6 W</li> <li>Total: 1000 W</li> </ul>
Operating altitude	100 V AC to 130 V AC: 0-3000 m 200 V AC to 240 V AC: 0-5000 m 240 V DC: 0-5000 m
Part number	02312EJK

## 5.10 W2PSA1150 (1150 W AC PoE Power Module)

### Product Support

[Table 5-37](#) lists the switch models supporting a 1150 W AC PoE power module.

**Table 5-37** Product support for a 1150 W AC PoE power module

Power Module Name	Product Support
W2PSA1150	S5710-52C-PWR-EI, S5720-52X-PWR-SI-ACF, S5720-56C-PWR-HI-AC, S5710-108C-PWR-HI, S5720-56C-PWR-EI-AC1, S5730-68C-PWR-SI, S5730S-68C-PWR-EI, S5730-36C-PWH-HI, S5730-44C-PWH-HI, S5730-60C-PWH-HI, S5730-68C-PWH-HI

### Appearance

**Figure 5-25** Appearance of a 1150 W AC PoE power module (W2PSA1150)



**Figure 5-26** shows a 1150 W AC PoE power module installed on a switch.

**Figure 5-26** 1150 W AC PoE power module on a switch



**NOTE**

If a switch uses 1150 W power modules, it is recommended that the switch be installed in an 800 mm or deeper standard cabinet. If the switch is installed in a 600 mm deep cabinet, the rear door of the cabinet cannot be closed.

## Functions

**Table 5-38** describes the functions of a 1150 W AC PoE power module.

**Table 5-38** Functions of a 1150 W AC PoE power module

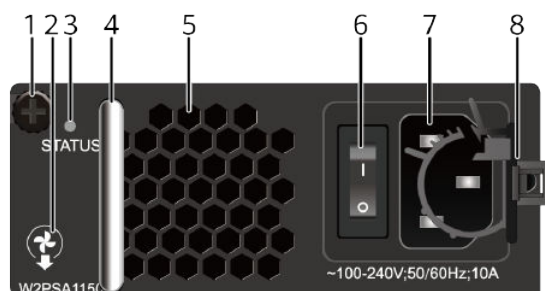
Function	Description
PoE power supply	Provides a maximum of 785.4 W PoE power.
Input protection	Provides protection against input overcurrent and input undervoltage.
Output protection	Provides protection against output overvoltage, output overcurrent, and output short-circuit.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold (70°C), the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

**NOTE**

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Panel

**Figure 5-27** Panel of a 1150 W AC PoE power module (W2PSA1150)



1. Captive screw	2. Airflow flag (air out)	3. Indicator	4. Handle
5. Fan	6. Power switch	7. AC power socket	8. AC power cable locking strap

**Table 5-39** describes indicators on a 1150 W AC PoE power module panel.

**Table 5-39** Description of indicators on a 1150 W AC PoE power module panel

Indicator	Color	Description
STATUS	Green	<p>Off:</p> <ul style="list-style-type: none"> <li>The AC power input is abnormal, for example, no AC input power, AC input overvoltage, or AC input undervoltage occurs.</li> <li>The AC power output is abnormal, for example, output undervoltage or overtemperature occurs.</li> </ul> <p>Steady on: The AC power input is in the normal range.</p> <p>Blinking: The AC power output is abnormal, for example, overvoltage, overcurrent, or short circuit occurs.</p>

## Specifications

**Table 5-40** lists the specifications of a 1150 W AC PoE power module.

**Table 5-40** Technical specifications of a 1150 W AC PoE power module

Item	Description
Dimensions (H x W x D)	41.4 mm x 100.0 mm x 281.0 mm (1.63 in. x 3.9 in. x 11.1 in.)
Weight	< 1.6 kg (3.53 lb)
Rated input voltage	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage	90 V AC to 290 V AC, 45 Hz to 65 Hz
Input current	10 A
Maximum output current	<ul style="list-style-type: none"><li>• +12 V: 29.17 A</li><li>• -53.5 V: 14.95 A</li></ul>
Maximum output power	<ul style="list-style-type: none"><li>• PoE: 785.4 W (220 V)/446.6 W (110 V)</li><li>• Total: 1150 W (220 V)/800 W (110 V)</li></ul>
Part number	02130984

## 5.11 PAC60S12-AR (60 W AC&240 V DC Power Module)

### Overview

**Table 5-41** Basic information about the PAC60S12-AR

Item	Details
Description	60 W AC&240 V DC Power Module
Part Number	02312SLE
Model	PAC60S12-AR

## Appearance

**Figure 5-28** Appearance of the PAC60S12-AR



## Version Mapping

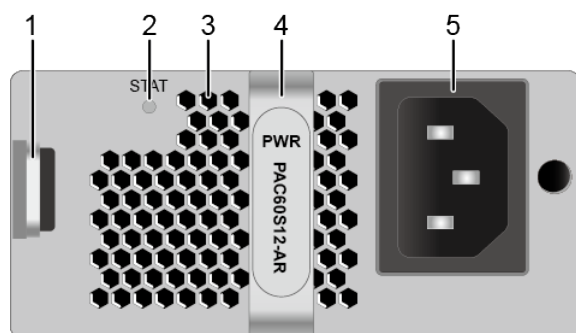
**Table 5-42** Mappings between PAC60S12-AR and product models

Product	Product Model	First Supported Version
S5735-S	S5735-S24T4X (98010938)	V200R019C00
S5735-S	S5735-S32ST4X (98010931)	V200R019C00
S5735-S	S5735-S48T4X (98010941)	V200R019C00
S5735S-S	S5735S-S24T4S-A (98010939)	V200R019C00
S5735S-S	S5735S-S24T4X-A (98010967)	V200R019C10
S5735S-S	S5735S-S32ST4X-A (98010932)	V200R019C00
S5735S-S	S5735S-S48T4S-A (98010942)	V200R019C00
S5735S-S	S5735S-S48T4X-A (98010968)	V200R019C10
S5735-S-I	S5735-S24T4X-I (98010960)	V200R019C10



## Panel

**Figure 5-29** Panel of the PAC60S12-AR



1. Lock	2. Indicator	3. Air vent	4. Handle
5. AC power socket	-	-	-

**Table 5-43** Indicators on the PAC60S12-AR

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, undervoltage or overtemperature).
		Green	Steady on	The power module is working normally.

Silkscreen	Name	Color	Status	Description
		Green	Blinking	The output power is out of range, for example, overvoltage, overcurrent, or short circuit occurs.

## Functions and Features

**Table 5-44** Functions of a 60 W AC power module

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically resume power supply when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the output voltage restores to the normal range, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

 NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Technical Specifications

**Table 5-45** Technical specifications of the PAC60S12-AR

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	0.68 kg (1.5 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 240 V AC, 50/60 Hz 240 V DC
Input voltage range [V]	90 V AC to 264 V AC, 47 Hz to 63 Hz 190 V DC to 290 V DC
Maximum input current [A]	100 V AC to 240 V AC: 2 A 240 V DC: 2 A
Rated output voltage [V]	12 V
Rated output current [A]	5 A
Rated output power [W]	60 W
Power dissipation Mode	Natural heat dissipation without fans
Hot swapping	Supported

## 5.12 PAC150S12-R (150 W AC Power Module)

### Overview

**Table 5-46** Basic information about the PAC150S12-R

Item	Details
Description	150 W AC Power Module
Part Number	02312DUY
Model	PAC150S12-R

## Appearance

**Figure 5-30** Appearance of the PAC150S12-R



## Version Mapping

**Table 5-47** Mappings between PAC150S12-R and product models

Product	Product Model	First Supported Version
S5731-S	S5731-S24T4X (02353AHU)	V200R019C00
S5731-S	S5731-S24T4X (02353AHU-001)	V200R020C10
S5731-S	S5731-S24T4X (98011851)	V200R021C10SPC600
S5731-S	S5731-S32ST4X (98011813)	V200R021C01
S5731-S	S5731-S32ST4X (98011813-002)	V200R021C10SPC600
S5731-S	S5731-S48S4X (98011805)	V200R021C01
S5731-S	S5731-S48S4X (98011805-001)	V200R021C10SPC600
S5731-S	S5731-S48T4X (02353AJB)	V200R019C00
S5731-S	S5731-S48T4X (02353AJB-003)	V200R020C10

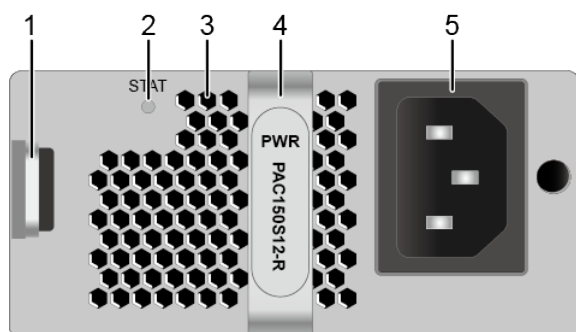
Product	Product Model	First Supported Version
S5731-S	S5731-S48T4X (98011847)	V200R021C10SPC600
S5731S-S	S5731S-S24T4X-A (02353AHV)	V200R019C00
S5731S-S	S5731S-S24T4X-A (02353AHV-001)	V200R020C10
S5731S-S	S5731S-S24T4X-A (98011852)	V200R021C10SPC600
S5731S-S	S5731S-S32ST4X-A (98011814)	V200R021C01
S5731S-S	S5731S-S32ST4X-A (98011814-001)	V200R021C10SPC600
S5731S-S	S5731S-S48S4X-A (98011806)	V200R021C01
S5731S-S	S5731S-S48S4X-A (98011806-001)	V200R021C10SPC600
S5731S-S	S5731S-S48T4X-A (02353AJC)	V200R019C00
S5731S-S	S5731S-S48T4X-A (02353AJC-003)	V200R020C10
S5731S-S	S5731S-S48T4X-A (98011848)	V200R021C10SPC600
S5731-H	S5731-H24T4XC (02352QPP)	V200R019C00
S5731-H	S5731-H24T4XC (02352QPP-001)	V200R020C10
S5731-H	S5731-H24T4XC (02352QPP-005)	V200R021C10SPC600
S5731-H	S5731-H48T4XC (02352QPT)	V200R019C00
S5731-H	S5731-H48T4XC (02352QPT-003)	V200R020C10
S5731-H	S5731-H48T4XC (02352QPT-007)	V200R021C10SPC600
S5731-H	S5731-H48T4XC-B (02353VAD)	V200R020C00
S5731-H	S5731-H48T4XC-B (02353VAD-003)	V200R020C10

Product	Product Model	First Supported Version
S5731-H	S5731-H48T4XC-B (02353VAD-005)	V200R021C10SPC600
S5731S-H	S5731S-H24T4S-A (02353DJE)	V200R019C00
S5731S-H	S5731S-H24T4S-A (02353DJE-001)	V200R020C10
S5731S-H	S5731S-H24T4S-A (02353DJE-003)	V200R021C10SPC600
S5731S-H	S5731S-H24T4X-A (02353HVH)	V200R019C10
S5731S-H	S5731S-H24T4X-A (02353HVH-001)	V200R020C10
S5731S-H	S5731S-H24T4X-A (02353HVH-003)	V200R021C10SPC600
S5731S-H	S5731S-H24T4XC-A (02352YRG)	V200R019C00
S5731S-H	S5731S-H24T4XC-A (02352YRG-001)	V200R020C10
S5731S-H	S5731S-H24T4XC-A (02352YRG-003)	V200R021C10SPC600
S5731S-H	S5731S-H48T4S-A (02353DJG)	V200R019C00
S5731S-H	S5731S-H48T4S-A (02353DJG-003)	V200R020C10
S5731S-H	S5731S-H48T4S-A (02353DJG-005)	V200R021C10SPC600
S5731S-H	S5731S-H48T4X-A (02353HVJ)	V200R019C10
S5731S-H	S5731S-H48T4X-A (02353HVJ-003)	V200R020C10
S5731S-H	S5731S-H48T4X-A (02353HVJ-005)	V200R021C10SPC600
S5731S-H	S5731S-H48T4XC-A (02352YRF)	V200R019C00
S5731S-H	S5731S-H48T4XC-A (02352YRF-003)	V200R020C10
S5731S-H	S5731S-H48T4XC-A (02352YRF-005)	V200R021C10SPC600

Product	Product Model	First Supported Version
S5735-S	S5735-S48S4X (98010947)	V200R019C00
S5735S-H	S5735S-H24S4XC-A (98011041)	V200R021C01
S5735S-H	S5735S-H24T4XC-A (98011025)	V200R020C00
S5735S-H	S5735S-H48T4XC-A (98011029)	V200R020C00
S5736-S	S5736-S24S4XC (98011038)	V200R021C01
S5736-S	S5736-S48S4XC (98011042)	V200R021C01

## Panel

**Figure 5-31** Panel of the PAC150S12-R



1. Lock	2. Indicator	3. Air vent	4. Handle
5. AC power socket	-	-	-

**Table 5-48** Indicators on the PAC150S12-R

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, undervoltage or overtemperature).
		Green	Steady on	The power module is working normally.
		Green	Blinking	The output power is out of range, for example, overvoltage, overcurrent, or short circuit occurs.

## Functions and Features

**Table 5-49** Functions of a 150 W AC power module

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically resume power supply when the input current restores to the normal range.



Function		Description
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the output voltage restores to the normal range, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

 **NOTE**

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Technical Specifications

**Table 5-50** Technical specifications of the PAC150S12-R

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	0.8 kg (1.76 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	3 A
Rated output voltage [V]	12 V
Rated output current [A]	12.5 A

Item	Specification
Rated output power [W]	150 W
Power dissipation Mode	Natural heat dissipation without fans
Hot swapping	Supported

## 5.13 W0PSA1701 (170 W AC Power Module)

### Overview

**Table 5-51** Basic information about the W0PSA1701

Item	Details
Description	170 W AC Power Module
Part Number	02130966
Model	W0PSA1701

### Appearance

**Figure 5-32** Appearance of the W0PSA1701



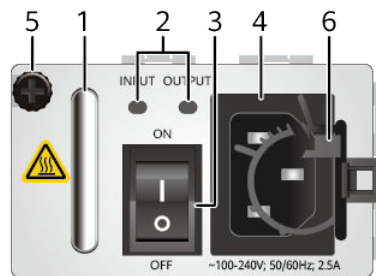
## Version Mapping

**Table 5-52** Mappings between W0PSA1701 and product models

Product	Product Model	First Supported Version
S5700-HI	S5700-28C-HI (02353630)	V100R006C01
S5700-HI	S5700-28C-HI-24S (02353631)	V100R006C01

## Panel

**Figure 5-33** Panel of the W0PSA1701



1. Handle	2. Power status indicator	3. Power switch	4. AC power socket
5. Captive screw	6. AC power cable locking strap	-	-

**Table 5-53** Indicators on the W0PSA1701

Silkscreen	Name	Color	Status	Description
INPUT	Power input indicator	-	Steady off	The AC input power is out of range.
		Green	Steady on	The AC power input is in the normal range.
OUTPUT	Power output indicator	-	Steady off	The AC output power is out of range.

Silkscreen	Name	Color	Status	Description
		Green	Steady on	The AC output power is in the normal range.
		Green	Blinking	The output power is out of range, for example, overvoltage, overcurrent, or short circuit occurs.

## Functions and Features

**Table 5-54** Functions of a 170 W AC power module

Function	Description
Input protection	Input overcurrent and undervoltage protection is provided.
Output protection	Output overvoltage and short-circuit protection is provided.
Alarm function	Various alarms such as the alarm triggered when there is no power input and the alarm triggered when there is no power output are supported.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold (75°C), the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Surge protection	-
Hot swapping	Supported

### NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Technical Specifications

**Table 5-55** Technical specifications of the WOPSA1701

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 70 mm x 205 mm (1.6 in. x 2.8 in. x 8.1 in.)
Weight without packaging [kg(lb)]	1.0 kg (2.2 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	2.5 A
Rated output voltage [V]	12 V
Rated output current [A]	14.2 A
Rated output power [W]	170 W
Power dissipation Mode	Natural heat dissipation without fans
Hot swapping	Supported

## 5.14 ES5M0PSD1700 (170 W DC Power Module)

### Overview

**Table 5-56** Basic information about the ES5M0PSD1700

Item	Details
Description	170 W DC Power Module
Part Number	02310GBM
Model	ES5M0PSD1700

## Appearance

Figure 5-34 Appearance of the ES5M0PSD1700



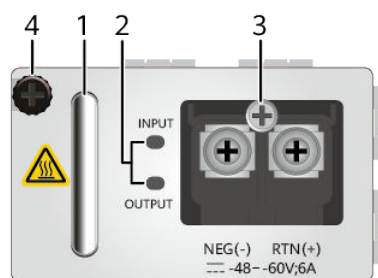
## Version Mapping

Table 5-57 Mappings between ES5M0PSD1700 and product models

Product	Product Model	First Supported Version
S5700-HI	S5700-28C-HI (02353630)	V100R006C01
S5700-HI	S5700-28C-HI-24S (02353631)	V100R006C01

## Panel

Figure 5-35 Panel of the ES5M0PSD1700



1. Handle	2. Power status indicator	3. DC power terminal	4. Captive screw
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**Table 5-58** Indicators on the ES5M0PSD1700

Silkscreen	Name	Color	Status	Description
INPUT	Power input indicator	-	Steady off	The DC input power is out of range.
		Green	Steady on	The DC power input is in the normal range.
OUTPUT	Power output indicator	-	Steady off	The DC output power is out of range.
		Green	Steady on	The DC output power is in the normal range.
		Green	Blinking	The output power is out of range, for example, overvoltage, overcurrent, or short circuit occurs.

## Functions and Features

**Table 5-59** Functions of a 170 W DC power module

Function	Description
Input protection	Input overcurrent and undervoltage protection is provided.
Output protection	Output overvoltage and short-circuit protection is provided.
Alarm function	Various alarms such as the alarm triggered when there is no power input and the alarm triggered when there is no power output are supported.

Function	Description
Reversed connection protection	-
Overtemperature protection	When the temperature of the power module exceeds a specified threshold (75°C), the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Surge protection	-
Hot swapping	Supported

 **NOTE**

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Technical Specifications

**Table 5-60** Technical specifications of the ES5M0PSD1700

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 70 mm x 205 mm (1.6 in. x 2.8 in. x 8.1 in.)
Weight without packaging [kg(lb)]	1.0 kg (2.2 lb)
Number of inputs	1
Rated input voltage [V]	-48 V DC to -60 V DC
Input voltage range [V]	-36 V DC to -72 V DC
Maximum input current [A]	6 A
Rated output voltage [V]	12 V
Rated output current [A]	14.2 A
Rated output power [W]	170 W
Power dissipation Mode	Natural heat dissipation without fans
Hot swapping	Supported

## 5.15 PDC180S12-CR (180 W DC Power Module)



## Overview

**Table 5-61** Basic information about the PDC180S12-CR

Item	Details
Description	180 W DC Power Module
Part Number	02312VRE
Model	PDC180S12-CR

## Appearance

**Figure 5-36** Appearance of the PDC180S12-CR



## Version Mapping

**Table 5-62** Mappings between PDC180S12-CR and product models

Product	Product Model	First Supported Version
S5731-S	S5731-S24T4X (02353AHU)	V200R020C00
S5731-S	S5731-S24T4X (02353AHU-001)	V200R020C10
S5731-S	S5731-S24T4X (98011851)	V200R021C10SPC600
S5731-S	S5731-S32ST4X (98011813)	V200R021C01

Product	Product Model	First Supported Version
S5731-S	S5731-S32ST4X (98011813-002)	V200R021C10SPC600
S5731-S	S5731-S48S4X (98011805)	V200R021C01
S5731-S	S5731-S48S4X (98011805-001)	V200R021C10SPC600
S5731-S	S5731-S48T4X (02353AJB)	V200R020C00
S5731-S	S5731-S48T4X (02353AJB-003)	V200R020C10
S5731-S	S5731-S48T4X (98011847)	V200R021C10SPC600
S5731S-S	S5731S-S24T4X-A (02353AHV)	V200R020C00
S5731S-S	S5731S-S24T4X-A (02353AHV-001)	V200R020C10
S5731S-S	S5731S-S24T4X-A (98011852)	V200R021C10SPC600
S5731S-S	S5731S-S32ST4X-A (98011814)	V200R021C01
S5731S-S	S5731S-S32ST4X-A (98011814-001)	V200R021C10SPC600
S5731S-S	S5731S-S48S4X-A (98011806)	V200R021C01
S5731S-S	S5731S-S48S4X-A (98011806-001)	V200R021C10SPC600
S5731S-S	S5731S-S48T4X-A (02353AJC)	V200R020C00
S5731S-S	S5731S-S48T4X-A (02353AJC-003)	V200R020C10
S5731S-S	S5731S-S48T4X-A (98011848)	V200R021C10SPC600
S5731-H	S5731-H24T4XC (02352QPP)	V200R020C00
S5731-H	S5731-H24T4XC (02352QPP-001)	V200R020C10
S5731-H	S5731-H24T4XC (02352QPP-005)	V200R021C10SPC600

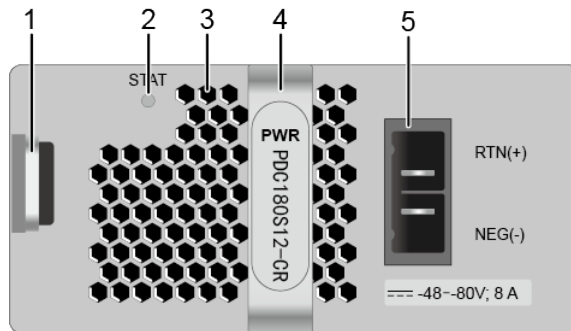
Product	Product Model	First Supported Version
S5731-H	S5731-H48T4XC (02352QPT)	V200R020C00
S5731-H	S5731-H48T4XC (02352QPT-003)	V200R020C10
S5731-H	S5731-H48T4XC (02352QPT-007)	V200R021C10SPC600
S5731-H	S5731-H48T4XC-B (02353VAD)	V200R020C00
S5731-H	S5731-H48T4XC-B (02353VAD-003)	V200R020C10
S5731-H	S5731-H48T4XC-B (02353VAD-005)	V200R021C10SPC600
S5731S-H	S5731S-H24T4S-A (02353DJE)	V200R020C00
S5731S-H	S5731S-H24T4S-A (02353DJE-001)	V200R020C10
S5731S-H	S5731S-H24T4S-A (02353DJE-003)	V200R021C10SPC600
S5731S-H	S5731S-H24T4X-A (02353HVH)	V200R020C00
S5731S-H	S5731S-H24T4X-A (02353HVH-001)	V200R020C10
S5731S-H	S5731S-H24T4X-A (02353HVH-003)	V200R021C10SPC600
S5731S-H	S5731S-H24T4XC-A (02352YRG)	V200R020C00
S5731S-H	S5731S-H24T4XC-A (02352YRG-001)	V200R020C10
S5731S-H	S5731S-H24T4XC-A (02352YRG-003)	V200R021C10SPC600
S5731S-H	S5731S-H48T4S-A (02353DJG)	V200R020C00
S5731S-H	S5731S-H48T4S-A (02353DJG-003)	V200R020C10
S5731S-H	S5731S-H48T4S-A (02353DJG-005)	V200R021C10SPC600
S5731S-H	S5731S-H48T4X-A (02353HVJ)	V200R020C00

Product	Product Model	First Supported Version
S5731S-H	S5731S-H48T4X-A (02353HVJ-003)	V200R020C10
S5731S-H	S5731S-H48T4X-A (02353HVJ-005)	V200R021C10SPC600
S5731S-H	S5731S-H48T4XC-A (02352YRF)	V200R020C00
S5731S-H	S5731S-H48T4XC-A (02352YRF-003)	V200R020C10
S5731S-H	S5731S-H48T4XC-A (02352YRF-005)	V200R021C10SPC600
S5735-S	S5735-S24T4X (98010938)	V200R020C00
S5735-S	S5735-S32ST4X (98010931)	V200R020C00
S5735-S	S5735-S48S4X (98010947)	V200R020C00
S5735-S	S5735-S48T4X (98010941)	V200R020C00
S5735S-S	S5735S-S24T4S-A (98010939)	V200R020C00
S5735S-S	S5735S-S24T4X-A (98010967)	V200R020C00
S5735S-S	S5735S-S32ST4X-A (98010932)	V200R020C00
S5735S-S	S5735S-S48T4S-A (98010942)	V200R020C00
S5735S-S	S5735S-S48T4X-A (98010968)	V200R020C00
S5735-S-I	S5735-S24T4X-I (98010960)	V200R020C00
S5735S-H	S5735S-H24S4XC-A (98011041)	V200R021C01
S5735S-H	S5735S-H24T4XC-A (98011025)	V200R020C00
S5735S-H	S5735S-H48T4XC-A (98011029)	V200R020C00
S5736-S	S5736-S24S4XC (98011038)	V200R021C01

Product	Product Model	First Supported Version
S5736-S	S5736-S48S4XC (98011042)	V200R021C01

## Panel

Figure 5-37 Panel of the PDC180S12-CR



1. Lock	2. Indicator	3. Air vent	4. Handle
5. DC power socket	-	-	-

Table 5-63 Indicators on the PDC180S12-CR

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, undervoltage or overtemperature).
		Green	Steady on	The power module is working normally.

Silkscreen	Name	Color	Status	Description
		Green	Blinking	The output power is out of range, for example, overvoltage, overcurrent, or short circuit occurs.

## Functions and Features

**Table 5-64** Functions of a 180 W DC power module

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically resume power supply when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the output voltage restores to the normal range, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

 **NOTE**

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Technical Specifications

**Table 5-65** Technical specifications of the PDC180S12-CR

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	0.62 kg (1.37 lb)
Number of inputs	1
Rated input voltage [V]	-48 V DC to -60 V DC
Input voltage range [V]	-38.4 V DC to -72 V DC
Maximum input current [A]	6 A
Rated output voltage [V]	12 V
Rated output current [A]	15 A
Rated output power [W]	180 W
Power dissipation Mode	Natural heat dissipation without fans
Hot swapping	Supported

## 5.16 PAC240S56-CN (240 W PoE AC&HVDC Power Module)

### Overview

**Table 5-66** Basic information about the PAC240S56-CN

Item	Details
Description	240 W PoE AC&HVDC Power Module
Part Number	02131265
Model	PAC240S56-CN

## Appearance

Figure 5-38 Appearance of the PAC240S56-CN



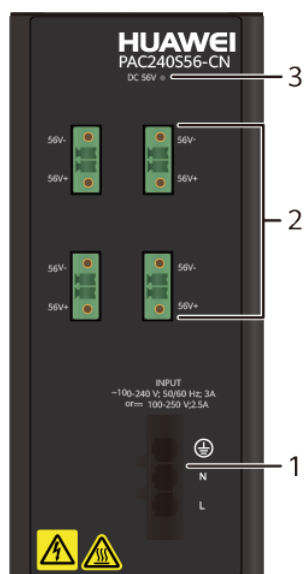
## Version Mapping

Table 5-67 Mappings between PAC240S56-CN and product models

Product	Product Model	First Supported Version
S5720I-SI	S5720I-12X-PWH-SI-DC (98010795)	V200R012C00

## Panel

Figure 5-39 Panel of the PAC240S56-CN





<p>1. 3-pin AC/DC input power socket</p> <p><b>NOTE</b></p> <p>Connect the power adapter to an external power supply system using a power cable with a "3-Pin AC/DC Power Terminal Block".</p> <p>The customer needs to prepare the power cable. The recommended conductor diameter of the power cable is 1.0 mm<sup>2</sup>.</p>	<p>2. Four 2-pin DC output power sockets</p> <p><b>NOTE</b></p> <p>Connect the power cable to the switch using a power cable with a "Power Cable (with 2PIN-I Terminal Blocks)".</p> <p>The customer needs to prepare the power cable. The recommended conductor diameter of the power cable is 1.0 mm<sup>2</sup>.</p>	<p>3. DC 56 V power output indicator</p>
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**Table 5-68** Indicators on the PAC240S56-CN

Silkscreen	Name	Color	Status	Description
DC 56V	Power output indicator	-	Steady off	The power output is abnormal or the power module is faulty.
		Green	Steady on	The power output is normal.
		Green	Blinking	The power module is in the output overvoltage or overcurrent protection state.

## Functions and Features

**Table 5-69** Functions and features of the PAC240S56-CN

Function	Description
System power supply and PoE power supply	The power module supports a maximum of 240 W system power and PoE power.
Input protection	The power module provides protection against input overvoltage, input undervoltage, and input overcurrent.

Function	Description
Output protection	The power module provides protection against output overvoltage, overcurrent, and short-circuit.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.

## Technical Specifications

**Table 5-70** Technical specifications of the PAC240S56-CN

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	150 mm x 65 mm x 133 mm (5.91 in. x 2.56 in. x 5.24 in.)
Weight without packaging [kg(lb)]	1.47 kg (3.24 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 240 V AC, 50/60 Hz 100 V DC to 250 V DC
Input voltage range [V]	90 V AC to 290 V AC, 45 to 66 Hz 77 V DC to 300 V DC
Maximum input current [A]	100 V AC to 240 V AC: 3 A 100 V DC to 138 V DC: 2.5 A 138 V DC to 250 V DC: 2 A
Rated output voltage [V]	56 V DC
Rated output power [W]	Total power: 240 W
Power dissipation Mode	Natural heat dissipation without fans

### 5.17 PAC-260WA-E (260 W AC Power Module)

## Overview

**Table 5-71** Basic information about the PAC-260WA-E

Item	Details
Description	260 W AC Power Module
Part Number	98010808
Model	PAC-260WA-E

## Appearance

**Figure 5-40** Appearance of the PAC-260WA-E



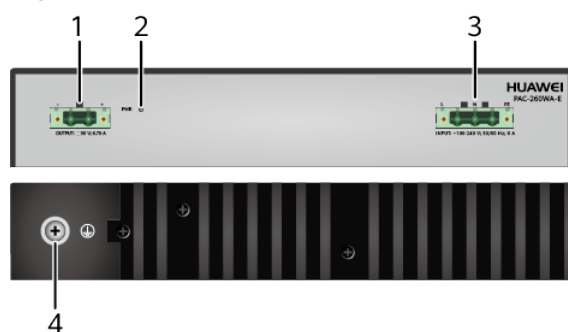
## Version Mapping

**Table 5-72** Mappings between PAC-260WA-E and product models

Product	Product Model	First Supported Version
S5720I-SI	S5720I-12X-PWH-SI-DC (98010795)	V200R012C00

## Panel

**Figure 5-41** Panel of the PAC-260WA-E



1. DC output power socket  <b>NOTE</b> It must be used with the Phoenix connector, which is included in the installation accessory package.	2. PWR power supply indicator	3. AC input power socket  <b>NOTE</b> It must be used with the Phoenix connector, which is included in the installation accessory package.	4. Ground screw  <b>NOTE</b> It is used with a <b>ground cable</b> .
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**Table 5-73** Indicators on the PAC-260WA-E

Silkscreen	Name	Color	Status	Description
PWR	Power supply indicator	-	Steady off	The power module has no output power or the output power is out of range.
		Green	Steady on	The output power of the power module is in the normal range.

## Functions and Features

**Table 5-74** Functions of a 260 W AC power module

Function	Description
System power supply and PoE power supply	The power module supports a maximum of 20 W system power and 240 W PoE power.
Input protection	The power module provides protection against input overvoltage, input undervoltage, and input overcurrent.
Output protection	The power module provides protection against output overvoltage, output overcurrent, and output short-circuit.
Overtemperature protection	When the temperature of the power module is high, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.

## Technical Specifications

**Table 5-75** Technical specifications of the PAC-260WA-E

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.84 in. x 7.09 in.)
Weight without packaging [kg(lb)]	2.5 kg (5.51 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current [A]	6 A
Rated output voltage [V]	56 V DC
Rated output current [A]	6.79 A
Rated output power [W]	PoE power: 240 W Total power: 260 W
Power dissipation Mode	Natural heat dissipation without fans

## 5.18 PDC-350WA-B (350 W DC Power Module)

### Overview

**Table 5-76** Basic information about the PDC-350WA-B

Item	Details
Description	350 W DC Power Module
Part Number	02310PQN
Model	PDC-350WA-B

## Appearance

Figure 5-42 Appearance of the PDC-350WA-B



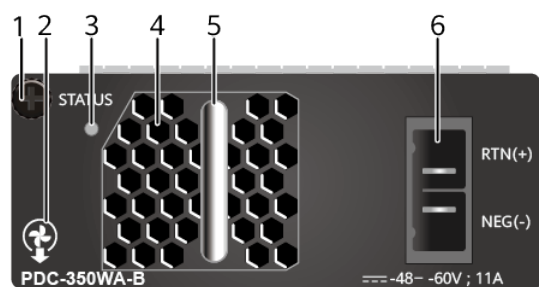
## Version Mapping

Table 5-77 Mappings between PDC-350WA-B and product models

Product	Product Model	First Supported Version
S5720-HI	S5720-56C-HI-AC (02358598)	V200R006C00
S5720-HI	S5720-32C-HI-24S-AC (02358600)	V200R006C00
S5730-HI	S5730-60C-HI-48S (02351XFS)	V200R013C00
S5730-HI	S5730-68C-HI-48S (02351XFT)	V200R013C00

## Panel

Figure 5-43 Panel of the PDC-350WA-B



1. Captive screw	2. Airflow flag (air out)	3. Indicator	4. Fan air vent
5. Handle	6. DC power socket	-	-

**Table 5-78** Indicators on the PDC-350WA-B

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overvoltage, overcurrent, short-circuit, or overtemperature).
		Green	Steady on	The power module is working normally.

## Functions and Features

**Table 5-79** Functions of a 350 W DC power module

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically start supplying power again when the input current restores to the normal range.

Function		Description
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the system recovers from output overvoltage, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

 **NOTE**

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Technical Specifications

**Table 5-80** Technical specifications of the PDC-350WA-B

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight without packaging [kg(lb)]	0.72 kg (1.59 lb)
Number of inputs	1
Rated input voltage [V]	-48 V DC to -60 V DC
Input voltage range [V]	-38.4 V DC to -72 V DC
Maximum input current [A]	11 A
Rated output voltage [V]	12 V



Item	Specification
Rated output current [A]	29.17 A
Rated output power [W]	350 W
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

## 5.19 PAC-600WA-B (600 W AC Power Module)

### Overview

**Table 5-81** Basic information about the PAC-600WA-B

Item	Details
Description	600 W AC Power Module
Part Number	02310PMH
Model	PAC-600WA-B

### Appearance

**Figure 5-44** Appearance of the PAC-600WA-B



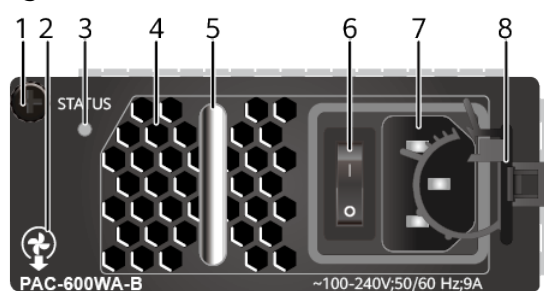
## Version Mapping

**Table 5-82** Mappings between PAC-600WA-B and product models

Product	Product Model	First Supported Version
S5720-HI	S5720-56C-HI-AC (02358598)	V200R006C00
S5720-HI	S5720-32C-HI-24S-AC (02358600)	V200R006C00
S5730-HI	S5730-60C-HI-48S (02351XFS)	V200R013C00
S5730-HI	S5730-68C-HI-48S (02351XFT)	V200R013C00

## Panel

**Figure 5-45** Panel of the PAC-600WA-B



1. Captive screw	2. Airflow flag (air out)	3. Indicator	4. Fan air vent
5. Handle	6. Power switch	7. AC power socket	8. AC power cable locking strap

**Table 5-83** Indicators on the PAC-600WA-B

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overvoltage, overcurrent, short-circuit, or overtemperature).
		Green	Steady on	The power module is working normally.

## Functions and Features

**Table 5-84** Functions of a 600 W AC power module

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically start supplying power again when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the system recovers from output overvoltage, the power module automatically resumes power supply.

Function		Description
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

 **NOTE**

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Technical Specifications

**Table 5-85** Technical specifications of the PAC-600WA-B

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight without packaging [kg(lb)]	1 kg (2.20 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current [A]	9 A
Rated output voltage [V]	12 V
Rated output current [A]	50 A
Rated output power [W]	600 W
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

## 5.20 PAC600S12-CB (600 W AC&240 V DC Power Module)

### Overview

**Table 5-86** Basic information about the PAC600S12-CB

Item	Details
Description	600 W AC&240 V DC Power Module
Part Number	02312FFU
Model	PAC600S12-CB

### Appearance

**Figure 5-46** Appearance of the PAC600S12-CB



### Version Mapping

**Table 5-87** Mappings between PAC600S12-CB and product models

Product	Product Model	First Supported Version
S5731-S	S5731-S24T4X (02353AHU)	V200R019C00
S5731-S	S5731-S24T4X (02353AHU-001)	V200R020C10

Product	Product Model	First Supported Version
S5731-S	S5731-S24T4X (98011851)	V200R021C10SPC600
S5731-S	S5731-S32ST4X (98011813)	V200R021C01
S5731-S	S5731-S32ST4X (98011813-002)	V200R021C10SPC600
S5731-S	S5731-S48S4X (98011805)	V200R021C01
S5731-S	S5731-S48S4X (98011805-001)	V200R021C10SPC600
S5731-S	S5731-S48T4X (02353AJB)	V200R019C00
S5731-S	S5731-S48T4X (02353AJB-003)	V200R020C10
S5731-S	S5731-S48T4X (98011847)	V200R021C10SPC600
S5731S-S	S5731S-S24T4X-A (02353AHV)	V200R019C00
S5731S-S	S5731S-S24T4X-A (02353AHV-001)	V200R020C10
S5731S-S	S5731S-S24T4X-A (98011852)	V200R021C10SPC600
S5731S-S	S5731S-S32ST4X-A (98011814)	V200R021C01
S5731S-S	S5731S-S32ST4X-A (98011814-001)	V200R021C10SPC600
S5731S-S	S5731S-S48S4X-A (98011806)	V200R021C01
S5731S-S	S5731S-S48S4X-A (98011806-001)	V200R021C10SPC600
S5731S-S	S5731S-S48T4X-A (02353AJC)	V200R019C00
S5731S-S	S5731S-S48T4X-A (02353AJC-003)	V200R020C10
S5731S-S	S5731S-S48T4X-A (98011848)	V200R021C10SPC600
S5731-H	S5731-H24T4XC (02352QPP)	V200R013C02

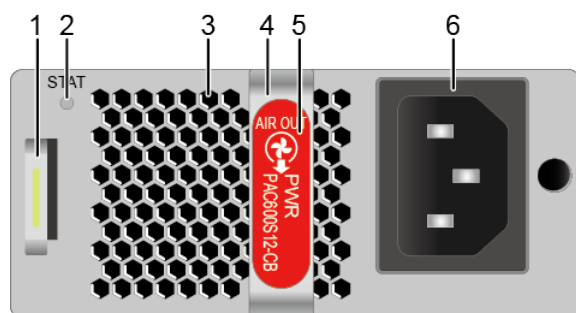
Product	Product Model	First Supported Version
S5731-H	S5731-H24T4XC (02352QPP-001)	V200R020C10
S5731-H	S5731-H24T4XC (02352QPP-005)	V200R021C10SPC600
S5731-H	S5731-H48T4XC (02352QPT)	V200R013C02
S5731-H	S5731-H48T4XC (02352QPT-003)	V200R020C10
S5731-H	S5731-H48T4XC (02352QPT-007)	V200R021C10SPC600
S5731S-H	S5731S-H24T4S-A (02353DJE)	V200R019C00
S5731S-H	S5731S-H24T4S-A (02353DJE-001)	V200R020C10
S5731S-H	S5731S-H24T4S-A (02353DJE-003)	V200R021C10SPC600
S5731S-H	S5731S-H24T4X-A (02353HVVH)	V200R019C10
S5731S-H	S5731S-H24T4X-A (02353HVVH-001)	V200R020C10
S5731S-H	S5731S-H24T4X-A (02353HVVH-003)	V200R021C10SPC600
S5731S-H	S5731S-H24T4XC-A (02352YRG)	V200R019C00
S5731S-H	S5731S-H24T4XC-A (02352YRG-001)	V200R020C10
S5731S-H	S5731S-H24T4XC-A (02352YRG-003)	V200R021C10SPC600
S5731S-H	S5731S-H48T4S-A (02353DJG)	V200R019C00
S5731S-H	S5731S-H48T4S-A (02353DJG-003)	V200R020C10
S5731S-H	S5731S-H48T4S-A (02353DJG-005)	V200R021C10SPC600
S5731S-H	S5731S-H48T4X-A (02353HVJ)	V200R019C10
S5731S-H	S5731S-H48T4X-A (02353HVJ-003)	V200R020C10

Product	Product Model	First Supported Version
S5731S-H	S5731S-H48T4X-A (02353HVJ-005)	V200R021C10SPC600
S5731S-H	S5731S-H48T4XC-A (02352YRF)	V200R019C00
S5731S-H	S5731S-H48T4XC-A (02352YRF-003)	V200R020C10
S5731S-H	S5731S-H48T4XC-A (02352YRF-005)	V200R021C10SPC600
S5732-H	S5732-H24S6Q (02353AJS)	V200R019C00
S5732-H	S5732-H24S6Q (02353AJS-001)	V200R020C10
S5732-H	S5732-H24S6Q (02353AJS-003)	V200R021C10SPC500
S5732-H	S5732-H24S6Q (02353AJS-004)	V200R021C10SPC600
S5732-H	S5732-H24S6Q (02353AJS-005)	V200R021C10SPC600
S5732-H	S5732-H48S6Q (02353AJU)	V200R019C00
S5732-H	S5732-H48S6Q (02353AJU-001)	V200R020C10
S5732-H	S5732-H48S6Q (02353AJU-003)	V200R021C10SPC500
S5732-H	S5732-H48S6Q (02353AJU-004)	V200R021C10SPC600
S5735S-H	S5735S-H24S4XC-A (98011041)	V200R021C01
S5736-S	S5736-S24S4XC (98011038)	V200R021C01
S5736-S	S5736-S48S4XC (98011042)	V200R021C01



## Panel

**Figure 5-47** Panel of the PAC600S12-CB



1. Lock	2. Indicator	3. Fan air vent	4. Handle
5. Airflow flag (air out)	6. AC power socket	-	-

**Table 5-88** Indicators on the PAC600S12-CB

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overcurrent, overvoltage, short circuit, or overtemperature).
		Green	Steady on	The power module is working normally.

## Functions and Features

**Table 5-89** Functions of a 600 W AC power module

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically resume power supply when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the output voltage restores to the normal range, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

 **NOTE**

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Technical Specifications

**Table 5-90** Technical specifications of the PAC600S12-CB

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)

Item	Specification
Weight without packaging [kg(lb)]	0.95 kg (2.09 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 240 V AC, 50/60 Hz 240 V DC
Input voltage range [V]	90 V AC to 290 V AC, 45 Hz to 65 Hz 190 V DC to 290 V DC
Maximum input current [A]	100 V AC to 240 V AC: 8 A 240 V DC: 4 A
Rated output voltage [V]	12 V
Rated output current [A]	50 A
Rated output power [W]	600 W
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

## 5.21 PAC600S12-DB (600 W AC&240 V DC Power Module)

### Overview

**Table 5-91** Basic information about the PAC600S12-DB

Item	Details
Description	600 W AC&240 V DC Power Module
Part Number	02131740
Model	PAC600S12-DB

## Appearance

**Figure 5-48** Appearance of the PAC600S12-DB



## Version Mapping

**Table 5-92** Mappings between PAC600S12-DB and product models

Product	Product Model	First Supported Version
S5731-S	S5731-S24T4X (02353AHU)	V200R020C10
S5731-S	S5731-S24T4X (02353AHU-001)	V200R020C10
S5731-S	S5731-S24T4X (98011851)	V200R021C10SPC600
S5731-S	S5731-S32ST4X (98011813)	V200R021C01
S5731-S	S5731-S32ST4X (98011813-002)	V200R021C10SPC600
S5731-S	S5731-S48S4X (98011805)	V200R021C01
S5731-S	S5731-S48S4X (98011805-001)	V200R021C10SPC600
S5731-S	S5731-S48T4X (02353AJB)	V200R020C10
S5731-S	S5731-S48T4X (02353AJB-003)	V200R020C10

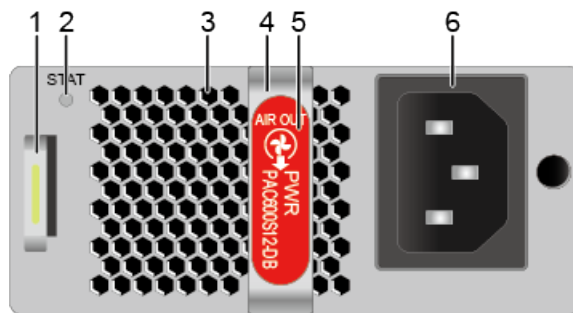
Product	Product Model	First Supported Version
S5731-S	S5731-S48T4X (98011847)	V200R021C10SPC600
S5731S-S	S5731S-S24T4X-A (02353AHV)	V200R020C10
S5731S-S	S5731S-S24T4X-A (02353AHV-001)	V200R020C10
S5731S-S	S5731S-S24T4X-A (98011852)	V200R021C10SPC600
S5731S-S	S5731S-S32ST4X-A (98011814)	V200R021C01
S5731S-S	S5731S-S32ST4X-A (98011814-001)	V200R021C10SPC600
S5731S-S	S5731S-S48S4X-A (98011806)	V200R021C01
S5731S-S	S5731S-S48S4X-A (98011806-001)	V200R021C10SPC600
S5731S-S	S5731S-S48T4X-A (02353AJC)	V200R020C10
S5731S-S	S5731S-S48T4X-A (02353AJC-003)	V200R020C10
S5731S-S	S5731S-S48T4X-A (98011848)	V200R021C10SPC600
S5731-H	S5731-H24T4XC (02352QPP)	V200R020C10
S5731-H	S5731-H24T4XC (02352QPP-001)	V200R020C10
S5731-H	S5731-H24T4XC (02352QPP-005)	V200R021C10SPC600
S5731-H	S5731-H48T4XC (02352QPT)	V200R020C10
S5731-H	S5731-H48T4XC (02352QPT-003)	V200R020C10
S5731-H	S5731-H48T4XC (02352QPT-007)	V200R021C10SPC600
S5731S-H	S5731S-H24T4S-A (02353DJE)	V200R020C10
S5731S-H	S5731S-H24T4S-A (02353DJE-001)	V200R020C10

Product	Product Model	First Supported Version
S5731S-H	S5731S-H24T4S-A (02353DJE-003)	V200R021C10SPC600
S5731S-H	S5731S-H24T4X-A (02353HVH)	V200R020C10
S5731S-H	S5731S-H24T4X-A (02353HVH-001)	V200R020C10
S5731S-H	S5731S-H24T4X-A (02353HVH-003)	V200R021C10SPC600
S5731S-H	S5731S-H24T4XC-A (02352YRG)	V200R020C10
S5731S-H	S5731S-H24T4XC-A (02352YRG-001)	V200R020C10
S5731S-H	S5731S-H24T4XC-A (02352YRG-003)	V200R021C10SPC600
S5731S-H	S5731S-H48T4S-A (02353DJG)	V200R020C10
S5731S-H	S5731S-H48T4S-A (02353DJG-003)	V200R020C10
S5731S-H	S5731S-H48T4S-A (02353DJG-005)	V200R021C10SPC600
S5731S-H	S5731S-H48T4X-A (02353HVJ)	V200R020C10
S5731S-H	S5731S-H48T4X-A (02353HVJ-003)	V200R020C10
S5731S-H	S5731S-H48T4X-A (02353HVJ-005)	V200R021C10SPC600
S5731S-H	S5731S-H48T4XC-A (02352YRF)	V200R020C10
S5731S-H	S5731S-H48T4XC-A (02352YRF-003)	V200R020C10
S5731S-H	S5731S-H48T4XC-A (02352YRF-005)	V200R021C10SPC600
S5732-H	S5732-H24S6Q (02353AJS)	V200R020C10
S5732-H	S5732-H24S6Q (02353AJS-001)	V200R020C10
S5732-H	S5732-H24S6Q (02353AJS-003)	V200R021C10SPC500

Product	Product Model	First Supported Version
S5732-H	S5732-H24S6Q (02353AJS-004)	V200R021C10SPC600
S5732-H	S5732-H24S6Q (02353AJS-005)	V200R021C10SPC600
S5732-H	S5732-H48S6Q (02353AJU)	V200R020C10
S5732-H	S5732-H48S6Q (02353AJU-001)	V200R020C10
S5732-H	S5732-H48S6Q (02353AJU-003)	V200R021C10SPC500
S5732-H	S5732-H48S6Q (02353AJU-004)	V200R021C10SPC600
S5735S-H	S5735S-H24S4XC-A (98011041)	V200R021C01
S5736-S	S5736-S24S4XC (98011038)	V200R021C01
S5736-S	S5736-S48S4XC (98011042)	V200R021C01

## Panel

Figure 5-49 Panel of the PAC600S12-DB



1. Lock	2. Indicator	3. Fan air vent	4. Handle
5. Airflow flag (air out)	6. AC power socket	-	-

**Table 5-93** Indicators on the PAC600S12-DB

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overcurrent, overvoltage, short circuit, or overtemperature).
		Green	Steady on	The power module is working normally.

## Functions and Features

**Table 5-94** Functions of a 600 W AC power module

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically resume power supply when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the output voltage restores to the normal range, the power module automatically resumes power supply.



Function		Description
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

 **NOTE**

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Technical Specifications

**Table 5-95** Technical specifications of the PAC600S12-DB

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	0.95 kg (2.09 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 240 V AC, 50/60 Hz 240 V DC
Input voltage range [V]	90 V AC to 290 V AC, 45 Hz to 65 Hz 190 V DC to 290 V DC
Maximum input current [A]	100 V AC to 240 V AC: 8 A 240 V DC: 4 A
Rated output voltage [V]	12 V
Rated output current [A]	50 A
Rated output power [W]	600 W

Item	Specification
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

## 5.22 PAC600S12-EB (600 W AC&240 V DC Power Module)

### Overview

**Table 5-96** Basic information about the PAC600S12-EB

Item	Details
Description	600 W AC&240 V DC Power Module
Part Number	02312FFU-002
Model	PAC600S12-EB

### Appearance

**Figure 5-50** Appearance of the PAC600S12-EB



## Version Mapping

**Table 5-97** Mappings between PAC600S12-EB and product models

Product	Product Model	First Supported Version
S5731-S	S5731-S24T4X (02353AHU)	V200R019C10
S5731-S	S5731-S24T4X (02353AHU-001)	V200R020C10
S5731-S	S5731-S24T4X (98011851)	V200R021C10SPC600
S5731-S	S5731-S32ST4X (98011813)	V200R021C01
S5731-S	S5731-S32ST4X (98011813-002)	V200R021C10SPC600
S5731-S	S5731-S48S4X (98011805)	V200R021C01
S5731-S	S5731-S48S4X (98011805-001)	V200R021C10SPC600
S5731-S	S5731-S48T4X (02353AJB)	V200R019C10
S5731-S	S5731-S48T4X (02353AJB-003)	V200R020C10
S5731-S	S5731-S48T4X (98011847)	V200R021C10SPC600
S5731S-S	S5731S-S24T4X-A (02353AHV)	V200R019C10
S5731S-S	S5731S-S24T4X-A (02353AHV-001)	V200R020C10
S5731S-S	S5731S-S24T4X-A (98011852)	V200R021C10SPC600
S5731S-S	S5731S-S32ST4X-A (98011814)	V200R021C01
S5731S-S	S5731S-S32ST4X-A (98011814-001)	V200R021C10SPC600
S5731S-S	S5731S-S48S4X-A (98011806)	V200R021C01
S5731S-S	S5731S-S48S4X-A (98011806-001)	V200R021C10SPC600

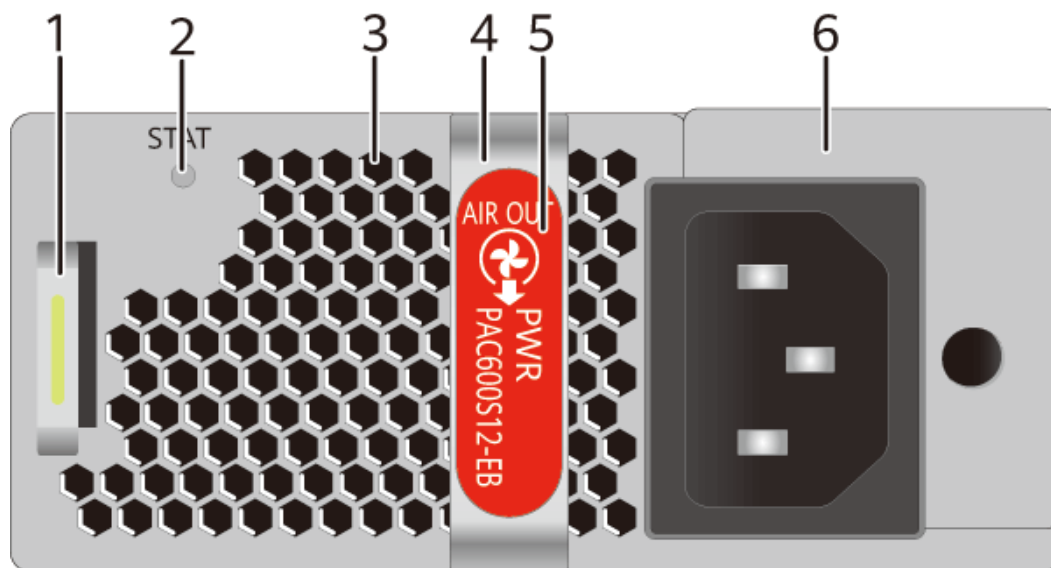
Product	Product Model	First Supported Version
S5731S-S	S5731S-S48T4X-A (02353AJC)	V200R019C10
S5731S-S	S5731S-S48T4X-A (02353AJC-003)	V200R020C10
S5731S-S	S5731S-S48T4X-A (98011848)	V200R021C10SPC600
S5731-H	S5731-H24T4XC (02352QPP)	V200R019C10
S5731-H	S5731-H24T4XC (02352QPP-001)	V200R020C10
S5731-H	S5731-H24T4XC (02352QPP-005)	V200R021C10SPC600
S5731-H	S5731-H48T4XC (02352QPT)	V200R019C10
S5731-H	S5731-H48T4XC (02352QPT-003)	V200R020C10
S5731-H	S5731-H48T4XC (02352QPT-007)	V200R021C10SPC600
S5731S-H	S5731S-H24T4S-A (02353DJE)	V200R019C10
S5731S-H	S5731S-H24T4S-A (02353DJE-001)	V200R020C10
S5731S-H	S5731S-H24T4S-A (02353DJE-003)	V200R021C10SPC600
S5731S-H	S5731S-H24T4X-A (02353HVVH)	V200R019C10
S5731S-H	S5731S-H24T4X-A (02353HVVH-001)	V200R020C10
S5731S-H	S5731S-H24T4X-A (02353HVVH-003)	V200R021C10SPC600
S5731S-H	S5731S-H24T4XC-A (02352YRG)	V200R019C10
S5731S-H	S5731S-H24T4XC-A (02352YRG-001)	V200R020C10
S5731S-H	S5731S-H24T4XC-A (02352YRG-003)	V200R021C10SPC600
S5731S-H	S5731S-H48T4S-A (02353DJG)	V200R019C10

Product	Product Model	First Supported Version
S5731S-H	S5731S-H48T4S-A (02353DJG-003)	V200R020C10
S5731S-H	S5731S-H48T4S-A (02353DJG-005)	V200R021C10SPC600
S5731S-H	S5731S-H48T4X-A (02353HVJ)	V200R019C10
S5731S-H	S5731S-H48T4X-A (02353HVJ-003)	V200R020C10
S5731S-H	S5731S-H48T4X-A (02353HVJ-005)	V200R021C10SPC600
S5731S-H	S5731S-H48T4XC-A (02352YRF)	V200R019C10
S5731S-H	S5731S-H48T4XC-A (02352YRF-003)	V200R020C10
S5731S-H	S5731S-H48T4XC-A (02352YRF-005)	V200R021C10SPC600
S5732-H	S5732-H24S6Q (02353AJS)	V200R019C10
S5732-H	S5732-H24S6Q (02353AJS-001)	V200R020C10
S5732-H	S5732-H24S6Q (02353AJS-003)	V200R021C10SPC500
S5732-H	S5732-H24S6Q (02353AJS-004)	V200R021C10SPC600
S5732-H	S5732-H24S6Q (02353AJS-005)	V200R021C10SPC600
S5732-H	S5732-H48S6Q (02353AJU)	V200R019C10
S5732-H	S5732-H48S6Q (02353AJU-001)	V200R020C10
S5732-H	S5732-H48S6Q (02353AJU-003)	V200R021C10SPC500
S5732-H	S5732-H48S6Q (02353AJU-004)	V200R021C10SPC600
S5735S-H	S5735S-H24S4XC-A (98011041)	V200R021C01
S5736-S	S5736-S24S4XC (98011038)	V200R021C01

Product	Product Model	First Supported Version
S5736-S	S5736-S48S4XC (98011042)	V200R021C01

## Panel

Figure 5-51 Panel of the PAC600S12-EB



1. Lock	2. Indicator	3. Fan air vent	4. Handle
5. Airflow flag (air out)	6. AC power socket	-	-

**Table 5-98** Indicators on the PAC600S12-EB

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overcurrent, overvoltage, short circuit, or overtemperature).
		Green	Steady on	The power module is working normally.

## Functions and Features

**Table 5-99** Functions of a 600 W AC power module

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically resume power supply when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the output voltage restores to the normal range, the power module automatically resumes power supply.

Function		Description
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

 **NOTE**

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Technical Specifications

**Table 5-100** Technical specifications of the PAC600S12-EB

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	0.985 kg (2.17 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 240 V AC, 50 Hz/60 Hz 240 V DC
Input voltage range [V]	90 V AC to 290 V AC; 45 Hz to 65 Hz 190 V DC to 290 V DC
Maximum input current [A]	100 V AC to 240 V AC: 8 A 240 V DC: 4 A
Rated output voltage [V]	12 V
Rated output current [A]	50 A
Rated output power [W]	600 W



Item	Specification
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

## 5.23 PAC600S56-CB (600 W PoE AC&240 V DC Power Module (Back to Front, Power panel side exhaust))

### Overview

**Table 5-101** Basic information about the PAC600S56-CB

Item	Details
Description	600 W PoE AC&240 V DC Power Module (Back to Front, Power panel side exhaust)
Part Number	02313PAC
Model	PAC600S56-CB

### Appearance

**Figure 5-52** Appearance of the PAC600S56-CB



## Version Mapping

**Table 5-102** Mappings between PAC600S56-CB and product models

Product	Product Model	First Supported Version
S5731-S	S5731-S24P4X (02353AHX)	V200R021C10SPC500
S5731-S	S5731-S24P4X (02353AHX-001)	V200R021C10SPC500
S5731-S	S5731-S24P4X (02353AHX-003)	V200R021C10SPC600
S5731-S	S5731-S48P4X (02353AJH)	V200R021C10SPC500
S5731-S	S5731-S48P4X (02353AJH-001)	V200R021C10SPC500
S5731-S	S5731-S48P4X (02353AJH-003)	V200R021C10SPC600
S5731S-S	S5731S-S24P4X-A (02353AHY)	V200R021C10SPC500
S5731S-S	S5731S-S24P4X-A (02353AHY-001)	V200R021C10SPC500
S5731S-S	S5731S-S24P4X-A (02353AHY-003)	V200R021C10SPC600
S5731S-S	S5731S-S48P4X-A (02353AJJ)	V200R021C10SPC500
S5731S-S	S5731S-S48P4X-A (02353AJJ-001)	V200R021C10SPC500
S5731S-S	S5731S-S48P4X-A (02353AJJ-003)	V200R021C10SPC600
S5731-H	S5731-H24HB4XZ (02354QXD)	V200R021C10SPC500
S5731-H	S5731-H24HB4XZ (02354QXD-001)	V200R021C10SPC600
S5731-H	S5731-H24P4XC (02352QPV)	V200R021C10SPC500
S5731-H	S5731-H24P4XC (02352QPV-001)	V200R021C10SPC500
S5731-H	S5731-H24P4XC (02352QPV-003)	V200R021C10SPC600

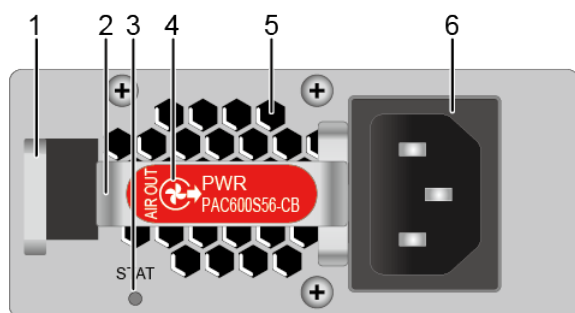
Product	Product Model	First Supported Version
S5731-H	S5731-H48HB4XZ (02354QXB)	V200R021C10SPC500
S5731-H	S5731-H48HB4XZ (02354QXB-001)	V200R021C10SPC600
S5731-H	S5731-H48P4XC (02352SVD)	V200R021C10SPC500
S5731-H	S5731-H48P4XC (02352SVD-001)	V200R021C10SPC500
S5731-H	S5731-H48P4XC (02352SVD-003)	V200R021C10SPC600
S5731S-H	S5731S-H24HB4XZ-A (02354QXE)	V200R021C10SPC500
S5731S-H	S5731S-H24HB4XZ-A (02354QXE-001)	V200R021C10SPC600
S5731S-H	S5731S-H48HB4XZ-A (02354QXC)	V200R021C10SPC500
S5731S-H	S5731S-H48HB4XZ-A (02354QXC-001)	V200R021C10SPC600
S5732-H	S5732-H24UM2CC (02353HUC)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353HUC-003)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY-001)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY-004)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY-010)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY-011)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY-014)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY-020)	V200R022C00
S5732-H	S5732-H24UM2CC (02353SJY-021)	V200R022C00

Product	Product Model	First Supported Version
S5732-H	S5732-H24UM2CC (02353SJY-024)	V200R022C00
S5732-H	S5732-H48UM2CC (02353HUB)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353HUB-002)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-001)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-003)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-004)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-010)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-011)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-013)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-014)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-020)	V200R022C00
S5732-H	S5732-H48UM2CC (02353SJT-021)	V200R022C00
S5732-H	S5732-H48UM2CC (02353SJT-023)	V200R022C00
S5732-H	S5732-H48UM2CC (02353SJT-024)	V200R022C00
S5732-H	S5732-H48XUM2CC (02353MLH)	V200R021C10SPC500
S5732-H	S5732-H48XUM2CC (02353MLH-001)	V200R021C10SPC500
S5732-H	S5732-H48XUM2CC (02353MLH-002)	V200R023C10
S5735S-H	S5735S-H24U4XC-A (98011033)	V200R021C10SPC500

Product	Product Model	First Supported Version
S5735S-H	S5735S-H48U4XC-A (98011037)	V200R021C10SPC500
S5736-S	S5736-S24UM4XC (98011020)	V200R021C10SPC500
S5736-S	S5736-S24UM4XC (98011020-001)	V200R021C10SPC500
S5736-S	S5736-S24UM4XC (98011020-004)	V200R021C10SPC500

## Panel

**Figure 5-53** Panel of the PAC600S56-CB



1. Lock	2. Handle	3. Indicator	4. Airflow flag (air out)
5. Fan air vent	6. AC power socket	-	-

**Table 5-103** Indicators on the PAC600S56-CB

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overvoltage or overtemperature).
		Green	Steady on	The power module output is normal.

## Functions and Features

**Table 5-104** Functions of a 600 W AC PoE power module

Function	Description
PoE power supply	Provides PoE power.
Input protection	Provides protection against input overvoltage, input undervoltage, and input overcurrent.
Output protection	Provides protection against output overvoltage, output overcurrent, and output short circuits.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

 NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Technical Specifications

**Table 5-105** Technical specifications of the PAC600S56-CB

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	1.1 kg (2.43 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 130 V AC; 50/60 Hz 200 V AC to 240 V AC; 50/60 Hz 240 V DC
Input voltage range [V]	90 V AC to 290 V AC; 45 Hz~66 Hz 190 V DC to 290 V DC
Maximum input current [A]	100 V AC to 130 V AC: 8 A 200 V AC to 240 V AC: 8 A 240 V DC: 4 A
Rated output voltage [V]	56 V
Rated output current [A]	100 V AC to 130 V AC input: 5.36 A 200–240 V AC and 240 V DC input: 10.72 A
Rated output power [W]	100 V AC to 130 V AC input: · Total power: 300 W 200 V AC to 240 V AC input and 240 V DC input: · Total power: 600 W
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

## 5.24 PAC600S56-EB (600 W PoE AC&240 V DC Power Module (66mm Width Case, Back to Front, Power panel side exhaust))

## Overview

**Table 5-106** Basic information about the PAC600S56-EB

Item	Details
Description	600 W PoE AC&240 V DC Power Module (66mm Width Case, Back to Front, Power panel side exhaust)
Part Number	02314APV
Model	PAC600S56-EB

## Appearance

**Figure 5-54** Appearance of the PAC600S56-EB



### NOTE

Figures in the document are for reference only, and the actual appearance of the devices may vary depending on the exact device model.

## Version Mapping

**Table 5-107** Mappings between PAC600S56-EB and product models

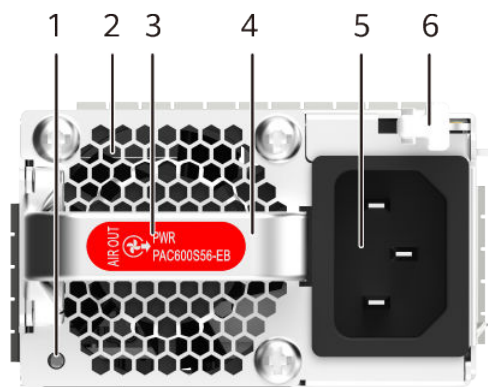
Product	Product Model	First Supported Version
S5731-S	S5731-S24UN4X2Q (02354VCC)	V200R022C00



Product	Product Model	First Supported Version
S5731-S	S5731-S8UM16UN2Q (02354VCD)	V200R022C00

## Panel

**Figure 5-55** Panel of the PAC600S56-EB



1. Running status indicator	2. Air vent hole	3. Airflow flag (air out)	4. Handle
5. Power socket	6. Lock	-	-

**Table 5-108** Indicators on the PAC600S56-EB

Silkscreen	Name	Color	Status	Description
-	Running status indicator	Green	Steady on	The power module output is normal.
		Green	Fast blinking (4 Hz)	Online loading

Silkscreen	Name	Color	Status	Description
		-	Steady off	<ul style="list-style-type: none"> <li>The power module is powered on but not inserted into the system.</li> <li>The power module input is normal but there is no output due to power overtemperature protection, output overcurrent, output overvoltage protection, short circuit protection, or component failure.</li> <li>The input is abnormal or there is no output due to no input.</li> </ul>

## Functions and Features

**Table 5-109** Functions and features of the PAC600S56-EB

Functions and Features	Description
Input overvoltage protection	In this protection state, the power module is turned off and stops supplying power. When the fault is eliminated, the power module can automatically resume power supply.

Functions and Features	Description
Input undervoltage protection	In this protection state, the power module is turned off and stops supplying power. When the fault is eliminated, the power module can automatically resume power supply.
Output overvoltage protection	In this protection state, the power module is in hiccup protection mode. If the power module enters this mode multiple times, the power output will be locked and the power module cannot automatically resume power supply.
Output overcurrent protection	<p>In this protection state, the power module is in hiccup protection mode. If the power module enters this mode multiple times, the power output will be locked.</p> <p>You can use any of the following methods to unlock the power module:</p> <ul style="list-style-type: none"> <li>● Power off the power module for 2s.</li> <li>● Clear the 0x03 alarm.</li> <li>● Run the reset command.</li> </ul>
Output short-circuit protection	<p>In this protection state, the power module is in hiccup protection mode. If the power module enters this mode multiple times, the power output will be locked.</p> <p>You can use any of the following methods to unlock the power module:</p> <ul style="list-style-type: none"> <li>● Power off the power module for 2s.</li> <li>● Clear the 0x03 alarm.</li> <li>● Run the reset command.</li> </ul>
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.

## Technical Specifications

**Table 5-110** Technical specifications of the PAC600S56-EB

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 66 mm x 215 mm (1.57 in. x 2.6 in. x 8.46 in.)
Weight without packaging [kg(lb)]	0.9 kg (1.98 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 130 V AC; 50/60 Hz 200 V AC to 240 V AC; 50/60 Hz 240 V DC
Input voltage range [V]	90 V AC to 290 V AC; 45 Hz~66 Hz 190 V DC to 290 V DC
Maximum input current [A]	100 V AC to 130 V AC: 8 A 200 V AC to 240 V AC: 8 A 240 V DC: 4 A
Rated output voltage [V]	53.5 V or 55.5 V
Rated output current [A]	11.21 A @53.5 V, 10.81 A @55.5 V
Rated output power [W]	100 V AC to 130 V AC input: · Total power: 300 W 200 V AC to 240 V AC input and 240 V DC input: · Total power: 600 W
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

## 5.25 PAC1000S56-CB (02312KND: 1000 W PoE AC&240 V DC Power Module)

### Overview

**Table 5-111** Basic information about the PAC1000S56-CB

Item	Details
Description	1000 W PoE AC&240 V DC Power Module

Item	Details
Part Number	02312KND
Model	PAC1000S56-CB

## Appearance

**Figure 5-56** Appearance of the PAC1000S56-CB



## Version Mapping

**Table 5-112** Mappings between PAC1000S56-CB and product models

Product	Product Model	First Supported Version
S5731-S	S5731-S24P4X (02353AHX)	V200R019C00
S5731-S	S5731-S24P4X (02353AHX-001)	V200R020C10
S5731-S	S5731-S24P4X (02353AHX-003)	V200R021C10SPC600
S5731-S	S5731-S48P4X (02353AJH)	V200R019C00
S5731-S	S5731-S48P4X (02353AJH-001)	V200R020C10
S5731-S	S5731-S48P4X (02353AJH-003)	V200R021C10SPC600

Product	Product Model	First Supported Version
S5731S-S	S5731S-S24P4X-A (02353AHY)	V200R019C00
S5731S-S	S5731S-S24P4X-A (02353AHY-001)	V200R020C10
S5731S-S	S5731S-S24P4X-A (02353AHY-003)	V200R021C10SPC600
S5731S-S	S5731S-S48P4X-A (02353AJJ)	V200R019C00
S5731S-S	S5731S-S48P4X-A (02353AJJ-001)	V200R020C10
S5731S-S	S5731S-S48P4X-A (02353AJJ-003)	V200R021C10SPC600
S5731-H	S5731-H24HB4XZ (02354QXD)	V200R021C10SPC500
S5731-H	S5731-H24HB4XZ (02354QXD-001)	V200R021C10SPC600
S5731-H	S5731-H24P4XC (02352QPV)	V200R013C02
S5731-H	S5731-H24P4XC (02352QPV-001)	V200R020C10
S5731-H	S5731-H24P4XC (02352QPV-003)	V200R021C10SPC600
S5731-H	S5731-H48HB4XZ (02354QXB)	V200R021C10SPC500
S5731-H	S5731-H48HB4XZ (02354QXB-001)	V200R021C10SPC600
S5731-H	S5731-H48P4XC (02352SVD)	V200R013C02
S5731-H	S5731-H48P4XC (02352SVD-001)	V200R020C10
S5731-H	S5731-H48P4XC (02352SVD-003)	V200R021C10SPC600
S5731S-H	S5731S-H24HB4XZ-A (02354QXE)	V200R021C10SPC500
S5731S-H	S5731S-H24HB4XZ-A (02354QXE-001)	V200R021C10SPC600
S5731S-H	S5731S-H48HB4XZ-A (02354QXC)	V200R021C10SPC500

Product	Product Model	First Supported Version
S5731S-H	S5731S-H48HB4XZ-A (02354QXC-001)	V200R021C10SPC600
S5732-H	S5732-H24UM2CC (02353HUC)	V200R019C10
S5732-H	S5732-H24UM2CC (02353HUC-003)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY)	V200R019C10
S5732-H	S5732-H24UM2CC (02353SJY-001)	V200R019C10
S5732-H	S5732-H24UM2CC (02353SJY-004)	V200R019C10
S5732-H	S5732-H24UM2CC (02353SJY-010)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY-011)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY-014)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY-020)	V200R022C00
S5732-H	S5732-H24UM2CC (02353SJY-021)	V200R022C00
S5732-H	S5732-H24UM2CC (02353SJY-024)	V200R022C00
S5732-H	S5732-H48UM2CC (02353HUB)	V200R019C10
S5732-H	S5732-H48UM2CC (02353HUB-002)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT)	V200R019C10
S5732-H	S5732-H48UM2CC (02353SJT-001)	V200R019C10
S5732-H	S5732-H48UM2CC (02353SJT-003)	V200R019C10
S5732-H	S5732-H48UM2CC (02353SJT-004)	V200R019C10
S5732-H	S5732-H48UM2CC (02353SJT-010)	V200R021C10SPC500

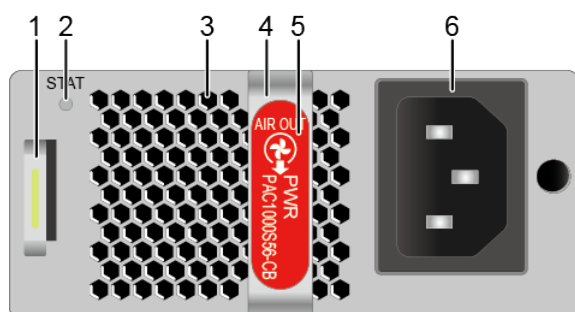
Product	Product Model	First Supported Version
S5732-H	S5732-H48UM2CC (02353SJT-011)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-013)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-014)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-020)	V200R022C00
S5732-H	S5732-H48UM2CC (02353SJT-021)	V200R022C00
S5732-H	S5732-H48UM2CC (02353SJT-023)	V200R022C00
S5732-H	S5732-H48UM2CC (02353SJT-024)	V200R022C00
S5732-H	S5732-H48XUM2CC (02353MLH)	V200R019C20
S5732-H	S5732-H48XUM2CC (02353MLH-001)	V200R021C10SPC500
S5732-H	S5732-H48XUM2CC (02353MLH-002)	V200R023C10
S5735-L	S5735-L48P4X-A (98010944)	V200R019C00
S5735S-L	S5735S-L48P4S-A (98010946)	V200R019C00
S5735S-L	S5735S-L48P4X-A (98010945)	V200R019C00
S5735-S	S5735-S24P4X (98010940)	V200R019C00
S5735-S	S5735-S48P4X (98010943)	V200R019C00
S5735S-S	S5735S-S24P4X-A (98010969)	V200R019C10
S5735S-S	S5735S-S48P4X-A (98010970)	V200R019C10
S5735S-H	S5735S-H24U4XC-A (98011033)	V200R020C00
S5735S-H	S5735S-H48U4XC-A (98011037)	V200R020C00



Product	Product Model	First Supported Version
S5736-S	S5736-S24UM4XC (98011020)	V200R020C00
S5736-S	S5736-S24UM4XC (98011020-001)	V200R020C00
S5736-S	S5736-S24UM4XC (98011020-004)	V200R020C00

## Panel

**Figure 5-57** Panel of the PAC1000S56-CB



1. Lock	2. Indicator	3. Fan air vent	4. Handle
5. Airflow flag (air out)	6. AC power socket	-	-

**Table 5-113** Indicators on the PAC1000S56-CB

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overvoltage or overtemperature).
		Green	Steady on	The power module output is normal.

## Functions and Features

**Table 5-114** Functions of a 1000 W AC PoE power module

Function	Description
PoE power supply	Provides PoE power.
Input protection	Provides protection against input overvoltage, input undervoltage, and input overcurrent.
Output protection	Provides protection against output overvoltage, output overcurrent, and output short circuits.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

 **NOTE**

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Technical Specifications

**Table 5-115** Technical specifications of the PAC1000S56-CB

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	1.1 kg (2.43 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 130 V AC, 50/60 Hz 200 V AC to 240 V AC, 50/60 Hz 240 V DC
Input voltage range [V]	90 V AC to 290 V AC, 45 Hz to 65 Hz 190 V DC to 290 V DC
Maximum input current [A]	100 V AC to 130 V AC: 12 A 200 V AC to 240 V AC: 8 A 240 V DC: 8 A
Rated output voltage [V]	56 V
Rated output current [A]	100 V AC to 130 V AC input: 16.08 A 200 V AC to 240 V AC input and 240 V DC input: 17.86 A
Rated output power [W]	100 V AC to 130 V AC input: •Total: 900 W 200 V AC to 240 V AC input and 240 V DC input: •Total: 1000 W
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

## 5.26 PAC1000S56-CB (02312KND-001: 1000 W PoE AC&240 V DC Power Module)

## Overview

**Table 5-116** Basic information about the PAC1000S56-CB

Item	Details
Description	1000 W PoE AC&240 V DC Power Module
Part Number	02312KND-001
Model	PAC1000S56-CB

## Appearance

**Figure 5-58** Appearance of the PAC1000S56-CB



## Version Mapping

**Table 5-117** Mappings between PAC1000S56-CB and product models

Product	Product Model	First Supported Version
S5731-S	S5731-S24P4X (02353AHX)	V200R021C10
S5731-S	S5731-S24P4X (02353AHX-001)	V200R020C10
S5731-S	S5731-S24P4X (02353AHX-003)	V200R021C10SPC600
S5731-S	S5731-S48P4X (02353AJH)	V200R021C10
S5731-S	S5731-S48P4X (02353AJH-001)	V200R020C10

Product	Product Model	First Supported Version
S5731-S	S5731-S48P4X (02353AJH-003)	V200R021C10SPC600
S5731S-S	S5731S-S24P4X-A (02353AHY)	V200R021C10
S5731S-S	S5731S-S24P4X-A (02353AHY-001)	V200R020C10
S5731S-S	S5731S-S24P4X-A (02353AHY-003)	V200R021C10SPC600
S5731S-S	S5731S-S48P4X-A (02353AJJ)	V200R021C10
S5731S-S	S5731S-S48P4X-A (02353AJJ-001)	V200R020C10
S5731S-S	S5731S-S48P4X-A (02353AJJ-003)	V200R021C10SPC600
S5731-H	S5731-H24HB4XZ (02354QXD)	V200R021C10SPC500
S5731-H	S5731-H24HB4XZ (02354QXD-001)	V200R021C10SPC600
S5731-H	S5731-H24P4XC (02352QPV)	V200R019C10
S5731-H	S5731-H24P4XC (02352QPV-001)	V200R020C10
S5731-H	S5731-H24P4XC (02352QPV-003)	V200R021C10SPC600
S5731-H	S5731-H48HB4XZ (02354QXB)	V200R021C10SPC500
S5731-H	S5731-H48HB4XZ (02354QXB-001)	V200R021C10SPC600
S5731-H	S5731-H48P4XC (02352SVD)	V200R019C10
S5731-H	S5731-H48P4XC (02352SVD-001)	V200R020C10
S5731-H	S5731-H48P4XC (02352SVD-003)	V200R021C10SPC600
S5731S-H	S5731S-H24HB4XZ-A (02354QXE)	V200R021C10SPC500
S5731S-H	S5731S-H24HB4XZ-A (02354QXE-001)	V200R021C10SPC600

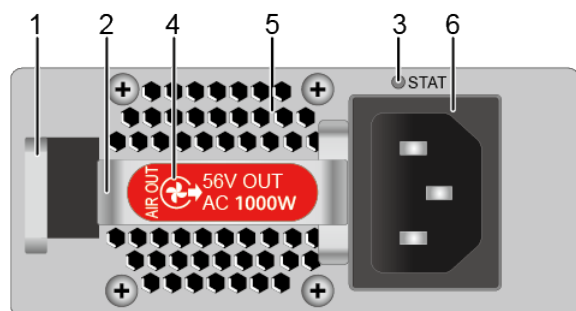
Product	Product Model	First Supported Version
S5731S-H	S5731S-H48HB4XZ-A (02354QXC)	V200R021C10SPC500
S5731S-H	S5731S-H48HB4XZ-A (02354QXC-001)	V200R021C10SPC600
S5732-H	S5732-H24UM2CC (02353HUC)	V200R019C10
S5732-H	S5732-H24UM2CC (02353HUC-003)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY)	V200R019C10
S5732-H	S5732-H24UM2CC (02353SJY-001)	V200R019C10
S5732-H	S5732-H24UM2CC (02353SJY-004)	V200R019C10
S5732-H	S5732-H24UM2CC (02353SJY-010)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY-011)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY-014)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY-020)	V200R022C00
S5732-H	S5732-H24UM2CC (02353SJY-021)	V200R022C00
S5732-H	S5732-H24UM2CC (02353SJY-024)	V200R022C00
S5732-H	S5732-H48UM2CC (02353HUB)	V200R019C10
S5732-H	S5732-H48UM2CC (02353HUB-002)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT)	V200R019C10
S5732-H	S5732-H48UM2CC (02353SJT-001)	V200R019C10
S5732-H	S5732-H48UM2CC (02353SJT-003)	V200R019C10
S5732-H	S5732-H48UM2CC (02353SJT-004)	V200R019C10

Product	Product Model	First Supported Version
S5732-H	S5732-H48UM2CC (02353SJT-010)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-011)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-013)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-014)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-020)	V200R022C00
S5732-H	S5732-H48UM2CC (02353SJT-021)	V200R022C00
S5732-H	S5732-H48UM2CC (02353SJT-023)	V200R022C00
S5732-H	S5732-H48UM2CC (02353SJT-024)	V200R022C00
S5732-H	S5732-H48XUM2CC (02353MLH)	V200R019C20
S5732-H	S5732-H48XUM2CC (02353MLH-001)	V200R021C10SPC500
S5732-H	S5732-H48XUM2CC (02353MLH-002)	V200R023C10
S5735-L	S5735-L48P4X-A (98010944)	V200R019C10
S5735S-L	S5735S-L48P4S-A (98010946)	V200R019C10
S5735S-L	S5735S-L48P4X-A (98010945)	V200R019C10
S5735-S	S5735-S24P4X (98010940)	V200R019C10
S5735-S	S5735-S48P4X (98010943)	V200R019C10
S5735S-S	S5735S-S24P4X-A (98010969)	V200R019C10
S5735S-S	S5735S-S48P4X-A (98010970)	V200R019C10
S5735S-H	S5735S-H24U4XC-A (98011033)	V200R020C00

Product	Product Model	First Supported Version
S5735S-H	S5735S-H48U4XC-A (98011037)	V200R020C00
S5736-S	S5736-S24UM4XC (98011020)	V200R020C00
S5736-S	S5736-S24UM4XC (98011020-001)	V200R020C00
S5736-S	S5736-S24UM4XC (98011020-004)	V200R020C00

## Panel

**Figure 5-59** Panel of the PAC1000S56-CB



1. Lock	2. Indicator	3. Fan air vent	4. Handle
5. Airflow flag (air out)	6. AC power socket	-	-



**Table 5-118** Indicators on the PAC1000S56-CB

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overvoltage or overtemperature).
		Green	Steady on	The power module output is normal.

## Functions and Features

**Table 5-119** Functions of a 1000 W AC PoE power module

Function	Description
PoE power supply	Provides PoE power.
Input protection	Provides protection against input overvoltage, input undervoltage, and input overcurrent.
Output protection	Provides protection against output overvoltage, output overcurrent, and output short circuits.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

 **NOTE**

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Technical Specifications

**Table 5-120** Technical specifications of the PAC1000S56-CB

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	1.1 kg (2.43 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 130 V AC, 50/60 Hz 200 V AC to 240 V AC, 50/60 Hz 240 V DC
Input voltage range [V]	90 V AC to 290 V AC, 45 Hz to 65 Hz 190 V DC to 290 V DC
Maximum input current [A]	100 V AC to 130 V AC: 12 A 200 V AC to 240 V AC: 8 A 240 V DC: 8 A
Rated output voltage [V]	56 V
Rated output current [A]	100 V AC to 130 V AC input: 16.08 A 200 V AC to 240 V AC input and 240 V DC input: 17.86 A
Rated output power [W]	100 V AC to 130 V AC input: •Total: 900 W 200 V AC to 240 V AC input and 240 V DC input: •Total: 1000 W
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

## 5.27 PAC1000S56-DB (1000 W PoE AC&240 V DC Power Module)

## Overview

**Table 5-121** Basic information about the PAC1000S56-DB

Item	Details
Description	1000 W PoE AC&240 V DC Power Module
Part Number	02131727
Model	PAC1000S56-DB

## Appearance

**Figure 5-60** Appearance of the PAC1000S56-DB

## Version Mapping

**Table 5-122** Mappings between PAC1000S56-DB and product models

Product	Product Model	First Supported Version
S5731-S	S5731-S24P4X (02353AHX)	V200R020C10
S5731-S	S5731-S24P4X (02353AHX-001)	V200R020C10
S5731-S	S5731-S24P4X (02353AHX-003)	V200R021C10SPC600
S5731-S	S5731-S48P4X (02353AJH)	V200R020C10

Product	Product Model	First Supported Version
S5731-S	S5731-S48P4X (02353AJH-001)	V200R020C10
S5731-S	S5731-S48P4X (02353AJH-003)	V200R021C10SPC600
S5731S-S	S5731S-S24P4X-A (02353AHY)	V200R020C10
S5731S-S	S5731S-S24P4X-A (02353AHY-001)	V200R020C10
S5731S-S	S5731S-S24P4X-A (02353AHY-003)	V200R021C10SPC600
S5731S-S	S5731S-S48P4X-A (02353AJJ)	V200R020C10
S5731S-S	S5731S-S48P4X-A (02353AJJ-001)	V200R020C10
S5731S-S	S5731S-S48P4X-A (02353AJJ-003)	V200R021C10SPC600
S5731-H	S5731-H24HB4XZ (02354QXD)	V200R021C10SPC500
S5731-H	S5731-H24HB4XZ (02354QXD-001)	V200R021C10SPC600
S5731-H	S5731-H24P4XC (02352QPV)	V200R020C10
S5731-H	S5731-H24P4XC (02352QPV-001)	V200R020C10
S5731-H	S5731-H24P4XC (02352QPV-003)	V200R021C10SPC600
S5731-H	S5731-H48HB4XZ (02354QXB)	V200R021C10SPC500
S5731-H	S5731-H48HB4XZ (02354QXB-001)	V200R021C10SPC600
S5731-H	S5731-H48P4XC (02352SVD)	V200R020C10
S5731-H	S5731-H48P4XC (02352SVD-001)	V200R020C10
S5731-H	S5731-H48P4XC (02352SVD-003)	V200R021C10SPC600
S5731S-H	S5731S-H24HB4XZ-A (02354QXE)	V200R021C10SPC500

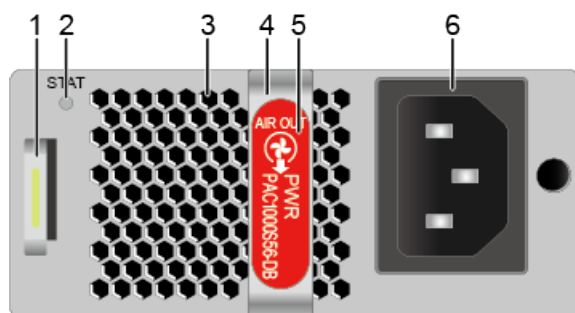
Product	Product Model	First Supported Version
S5731S-H	S5731S-H24HB4XZ-A (02354QXE-001)	V200R021C10SPC600
S5731S-H	S5731S-H48HB4XZ-A (02354QXC)	V200R021C10SPC500
S5731S-H	S5731S-H48HB4XZ-A (02354QXC-001)	V200R021C10SPC600
S5732-H	S5732-H24UM2CC (02353HUC)	V200R020C10
S5732-H	S5732-H24UM2CC (02353HUC-003)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY)	V200R020C10
S5732-H	S5732-H24UM2CC (02353SJY-001)	V200R020C10
S5732-H	S5732-H24UM2CC (02353SJY-004)	V200R020C10
S5732-H	S5732-H24UM2CC (02353SJY-010)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY-011)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY-014)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY-020)	V200R022C00
S5732-H	S5732-H24UM2CC (02353SJY-021)	V200R022C00
S5732-H	S5732-H24UM2CC (02353SJY-024)	V200R022C00
S5732-H	S5732-H48UM2CC (02353HUB)	V200R020C10
S5732-H	S5732-H48UM2CC (02353HUB-002)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT)	V200R020C10
S5732-H	S5732-H48UM2CC (02353SJT-001)	V200R020C10
S5732-H	S5732-H48UM2CC (02353SJT-003)	V200R020C10

Product	Product Model	First Supported Version
S5732-H	S5732-H48UM2CC (02353SJT-004)	V200R020C10
S5732-H	S5732-H48UM2CC (02353SJT-010)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-011)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-013)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-014)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-020)	V200R022C00
S5732-H	S5732-H48UM2CC (02353SJT-021)	V200R022C00
S5732-H	S5732-H48UM2CC (02353SJT-023)	V200R022C00
S5732-H	S5732-H48UM2CC (02353SJT-024)	V200R022C00
S5732-H	S5732-H48XUM2CC (02353MLH)	V200R020C10
S5732-H	S5732-H48XUM2CC (02353MLH-001)	V200R021C10SPC500
S5732-H	S5732-H48XUM2CC (02353MLH-002)	V200R023C10
S5735-L	S5735-L48P4X-A (98010944)	V200R020C10
S5735S-L	S5735S-L48P4S-A (98010946)	V200R020C10
S5735S-L	S5735S-L48P4X-A (98010945)	V200R020C10
S5735-S	S5735-S24P4X (98010940)	V200R020C10
S5735-S	S5735-S48P4X (98010943)	V200R020C10
S5735S-S	S5735S-S24P4X-A (98010969)	V200R020C10
S5735S-S	S5735S-S48P4X-A (98010970)	V200R020C10

Product	Product Model	First Supported Version
S5735S-H	S5735S-H24U4XC-A (98011033)	V200R020C10
S5735S-H	S5735S-H48U4XC-A (98011037)	V200R020C10
S5736-S	S5736-S24UM4XC (98011020)	V200R020C10
S5736-S	S5736-S24UM4XC (98011020-001)	V200R020C10
S5736-S	S5736-S24UM4XC (98011020-004)	V200R020C10

## Panel

Figure 5-61 Panel of the PAC1000S56-DB



1. Lock	2. Indicator	3. Fan air vent	4. Handle
5. Airflow flag (air out)	6. AC power socket	-	-

**Table 5-123** Indicators on the PAC1000S56-DB

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overvoltage or overtemperature).
		Green	Steady on	The power module output is normal.

## Functions and Features

**Table 5-124** Functions of a 1000 W AC PoE power module

Function	Description
PoE power supply	Provides PoE power.
Input protection	Provides protection against input overvoltage, input undervoltage, and input overcurrent.
Output protection	Provides protection against output overvoltage, output overcurrent, and output short circuits.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported



 NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Technical Specifications

**Table 5-125** Technical specifications of the PAC1000S56-DB

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	1.1 kg (2.43 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 130 V AC, 50/60 Hz 200 V AC to 240 V AC, 50/60 Hz 240 V DC
Input voltage range [V]	90 V AC to 290 V AC, 45 Hz to 65 Hz 190 V DC to 290 V DC
Maximum input current [A]	100 V AC to 130 V AC: 12 A 200 V AC to 240 V AC: 8 A 240 V DC: 8 A
Rated output voltage [V]	56 V
Rated output current [A]	100 V AC to 130 V AC input: 16.08 A 200 V AC to 240 V AC input and 240 V DC input: 17.86 A
Rated output power [W]	100 V AC to 130 V AC input: •Total: 900 W 200 V AC to 240 V AC input and 240 V DC input: •Total: 1000 W
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

## 5.28 PAC1000S56-EB (1000 W PoE AC&240 V DC Power Module (66 mm Width Case, Back to Front, Power panel side exhaust))

## Overview

**Table 5-126** Basic information about the PAC1000S56-EB

Item	Details
Description	1000 W PoE AC&240 V DC Power Module (66 mm Width Case, Back to Front, Power panel side exhaust)
Part Number	02314APU
Model	PAC1000S56-EB

## Appearance

**Figure 5-62** Appearance of the PAC1000S56-EB



**NOTE**

Figures in the document are for reference only, and the actual appearance of the devices may vary depending on the exact device model.

## Version Mapping

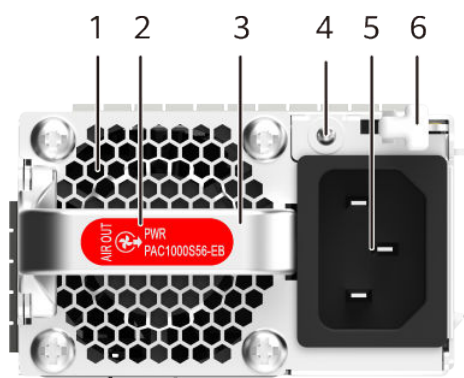
**Table 5-127** Mappings between PAC1000S56-EB and product models

Product	Product Model	First Supported Version
S5731-S	S5731-S24UN4X2Q (02354VCC)	V200R022C00

Product	Product Model	First Supported Version
S5731-S	S5731-S8UM16UN2Q (02354VCD)	V200R022C00

## Panel

**Figure 5-63** Panel of the PAC1000S56-EB



1. Air vent hole	2. Airflow flag (air out)	3. Handle	4. Running status indicator
5. Power socket	6. Lock	-	-

**Table 5-128** Indicators on the PAC1000S56-EB

Silkscreen	Name	Color	Status	Description
-	Running status indicator	Green	Steady on	The power module output is normal.
		Green	Fast blinking (4 Hz)	Online loading

Silkscreen	Name	Color	Status	Description
		-	Steady off	<ul style="list-style-type: none"> <li>The power module is powered on but not inserted into the system.</li> <li>The power module input is normal but there is no output due to power overtemperature protection, output overcurrent, output overvoltage protection, short circuit protection, or component failure.</li> <li>The input is abnormal or there is no output due to no input.</li> </ul>

## Functions and Features

**Table 5-129** Functions and features of the PAC1000S56-EB

Functions and Features	Description
Input overvoltage protection	In this protection state, the power module is turned off and stops supplying power. When the fault is eliminated, the power module can automatically resume power supply.

Functions and Features	Description
Input undervoltage protection	In this protection state, the power module is turned off and stops supplying power. When the fault is eliminated, the power module can automatically resume power supply.
Output overvoltage protection	In this protection state, the power module is in hiccup protection mode. When the fault is eliminated, the power module can automatically resume power supply.
Output overcurrent protection	In this protection state, the power module is in hiccup protection mode. If the power module enters this mode multiple times, the power output will be locked and the power module cannot automatically resume power supply.
Output short-circuit protection	In this protection state, the power module is in hiccup protection mode. If the power module enters this mode multiple times, the power output will be locked and the power module cannot automatically resume power supply.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.

## Technical Specifications

**Table 5-130** Technical specifications of the PAC1000S56-EB

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 66 mm x 215 mm (1.57 in. x 2.6 in. x 8.46 in.)
Weight without packaging [kg(lb)]	1.1 kg (2.43 lb)
Number of inputs	1

Item	Specification
Rated input voltage [V]	100 V AC to 130 V AC, 50/60 Hz 200 V AC to 240 V AC, 50/60 Hz 240 V DC
Input voltage range [V]	90 V AC to 290 V AC; 45 Hz~66 Hz 190 V DC to 290 V DC
Maximum input current [A]	100 V AC to 130 V AC: 12 A 200 V AC to 240 V AC: 8 A 240 V DC: 8 A
Rated output voltage [V]	53.5 V or 55.5 V
Rated output current [A]	18.69 A @53.5 V, 18.02 A @55.5 V
Rated output power [W]	100 V AC to 130 V AC input: - Total power: 900 W 200 V AC to 240 V AC and 240 V DC input: - Total power: 1000 W
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

## 5.29 PDC1000S56-CB (1000 W PoE DC Power Module)

### Overview

**Table 5-131** Basic information about the PDC1000S56-CB

Item	Details
Description	1000 W PoE DC Power Module
Part Number	02313EXT
Model	PDC1000S56-CB

## Appearance

**Figure 5-64** Appearance of the PDC1000S56-CB



## Version Mapping

**Table 5-132** Mappings between PDC1000S56-CB and product models

Product	Product Model	First Supported Version
S5731-S	S5731-S24P4X (02353AHX)	V200R021C00
S5731-S	S5731-S24P4X (02353AHX-001)	V200R021C00
S5731-S	S5731-S24P4X (02353AHX-003)	V200R021C10SPC600
S5731-S	S5731-S48P4X (02353AJH)	V200R021C00
S5731-S	S5731-S48P4X (02353AJH-001)	V200R021C00
S5731-S	S5731-S48P4X (02353AJH-003)	V200R021C10SPC600
S5731S-S	S5731S-S24P4X-A (02353AHY)	V200R021C00
S5731S-S	S5731S-S24P4X-A (02353AHY-001)	V200R021C00
S5731S-S	S5731S-S24P4X-A (02353AHY-003)	V200R021C10SPC600

Product	Product Model	First Supported Version
S5731S-S	S5731S-S48P4X-A (02353AJJ)	V200R021C00
S5731S-S	S5731S-S48P4X-A (02353AJJ-001)	V200R021C00
S5731S-S	S5731S-S48P4X-A (02353AJJ-003)	V200R021C10SPC600
S5731-H	S5731-H24HB4XZ (02354QXD)	V200R021C10SPC500
S5731-H	S5731-H24HB4XZ (02354QXD-001)	V200R021C10SPC600
S5731-H	S5731-H24P4XC (02352QPV)	V200R021C00
S5731-H	S5731-H24P4XC (02352QPV-001)	V200R021C00
S5731-H	S5731-H24P4XC (02352QPV-003)	V200R021C10SPC600
S5731-H	S5731-H48HB4XZ (02354QXB)	V200R021C10SPC500
S5731-H	S5731-H48HB4XZ (02354QXB-001)	V200R021C10SPC600
S5731-H	S5731-H48P4XC (02352SVD)	V200R021C00
S5731-H	S5731-H48P4XC (02352SVD-001)	V200R021C00
S5731-H	S5731-H48P4XC (02352SVD-003)	V200R021C10SPC600
S5731S-H	S5731S-H24HB4XZ-A (02354QXE)	V200R021C10SPC500
S5731S-H	S5731S-H24HB4XZ-A (02354QXE-001)	V200R021C10SPC600
S5731S-H	S5731S-H48HB4XZ-A (02354QXC)	V200R021C10SPC500
S5731S-H	S5731S-H48HB4XZ-A (02354QXC-001)	V200R021C10SPC600
S5732-H	S5732-H24UM2CC (02353HUC)	V200R021C00
S5732-H	S5732-H24UM2CC (02353HUC-003)	V200R021C10SPC500

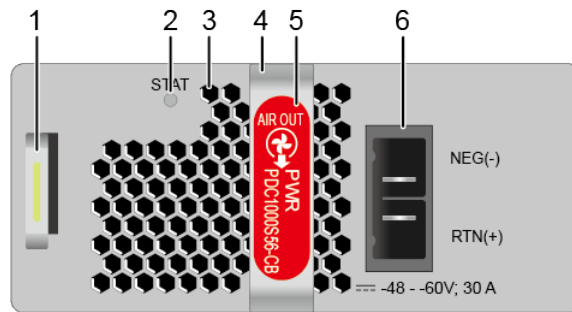


Product	Product Model	First Supported Version
S5732-H	S5732-H24UM2CC (02353SJY)	V200R021C00
S5732-H	S5732-H24UM2CC (02353SJY-001)	V200R021C00
S5732-H	S5732-H24UM2CC (02353SJY-004)	V200R021C00
S5732-H	S5732-H24UM2CC (02353SJY-010)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY-011)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY-014)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY-020)	V200R022C00
S5732-H	S5732-H24UM2CC (02353SJY-021)	V200R022C00
S5732-H	S5732-H24UM2CC (02353SJY-024)	V200R022C00
S5732-H	S5732-H48UM2CC (02353HUB)	V200R021C00
S5732-H	S5732-H48UM2CC (02353HUB-002)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT)	V200R021C00
S5732-H	S5732-H48UM2CC (02353SJT-001)	V200R021C00
S5732-H	S5732-H48UM2CC (02353SJT-003)	V200R021C00
S5732-H	S5732-H48UM2CC (02353SJT-004)	V200R021C00
S5732-H	S5732-H48UM2CC (02353SJT-010)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-011)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-013)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-014)	V200R021C10SPC500

Product	Product Model	First Supported Version
S5732-H	S5732-H48UM2CC (02353SJT-020)	V200R022C00
S5732-H	S5732-H48UM2CC (02353SJT-021)	V200R022C00
S5732-H	S5732-H48UM2CC (02353SJT-023)	V200R022C00
S5732-H	S5732-H48UM2CC (02353SJT-024)	V200R022C00
S5732-H	S5732-H48XUM2CC (02353MLH)	V200R021C00
S5732-H	S5732-H48XUM2CC (02353MLH-001)	V200R021C10SPC500
S5732-H	S5732-H48XUM2CC (02353MLH-002)	V200R023C10
S5735-L	S5735-L48P4X-A (98010944)	V200R021C00
S5735S-L	S5735S-L48P4S-A (98010946)	V200R021C00
S5735S-L	S5735S-L48P4X-A (98010945)	V200R021C00
S5735-S	S5735-S24P4X (98010940)	V200R021C00
S5735-S	S5735-S48P4X (98010943)	V200R021C00
S5735S-S	S5735S-S24P4X-A (98010969)	V200R021C00
S5735S-S	S5735S-S48P4X-A (98010970)	V200R021C00
S5736-S	S5736-S24UM4XC (98011020)	V200R021C00
S5736-S	S5736-S24UM4XC (98011020-001)	V200R021C00
S5736-S	S5736-S24UM4XC (98011020-004)	V200R021C00

## Panel

**Figure 5-65** Panel of the PDC1000S56-CB



1. Lock	2. Indicator	3. Fan air vent	4. Handle
5. Airflow flag (air out)	6. DC power socket	-	-

**Table 5-133** Indicators on the PDC1000S56-CB

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overcurrent, overvoltage, short circuit, or overtemperature).
		Green	Steady on	The power module is working normally.

## Functions and Features

**Table 5-134** Functions of a 1000 W DC PoE power module

Function	Description
PoE power supply	Provides PoE power.
Input protection	Provides protection against input undervoltage and input overcurrent.
Output protection	Provides protection against output overvoltage, output overcurrent, and output short circuits.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

 **NOTE**

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Technical Specifications

**Table 5-135** Technical specifications of the PDC1000S56-CB

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	2.0 kg (4.41 lb)
Number of inputs	1
Rated input voltage [V]	-48 V DC to -60 V DC
Input voltage range [V]	-38.4 V DC to -72 V DC
Maximum input current [A]	30 A
Rated output voltage [V]	56 V
Rated output current [A]	17.86 A
Rated output power [W]	1000 W
Power dissipation Mode	Heat dissipation with fan

Item	Specification
Hot swapping	Supported

## 5.30 PDC1000S12-DB (1000 W DC Power Module)

### Overview

**Table 5-136** Basic information about the PDC1000S12-DB

Item	Details
Description	1000 W DC Power Module
Part Number	02312QJK
Model	PDC1000S12-DB

### Appearance

**Figure 5-66** Appearance of the PDC1000S12-DB



### Version Mapping

**Table 5-137** Mappings between PDC1000S12-DB and product models

Product	Product Model	First Supported Version
S5731-S	S5731-S24T4X (02353AHU)	V200R019C00
S5731-S	S5731-S24T4X (02353AHU-001)	V200R020C10

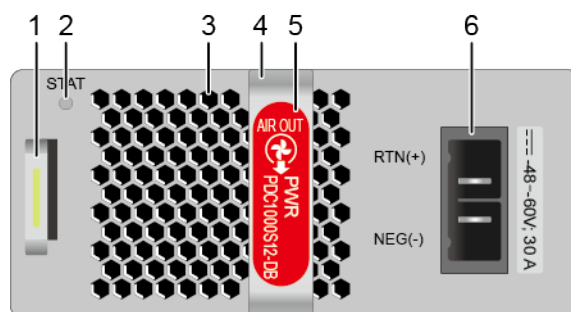
Product	Product Model	First Supported Version
S5731-S	S5731-S48T4X (02353AJB)	V200R019C00
S5731-S	S5731-S48T4X (02353AJB-003)	V200R020C10
S5731S-S	S5731S-S24T4X-A (02353AHV)	V200R019C00
S5731S-S	S5731S-S24T4X-A (02353AHV-001)	V200R020C10
S5731S-S	S5731S-S48T4X-A (02353AJC)	V200R019C00
S5731S-S	S5731S-S48T4X-A (02353AJC-003)	V200R020C10
S5731-H	S5731-H24T4XC (02352QPP)	V200R019C00
S5731-H	S5731-H24T4XC (02352QPP-001)	V200R020C10
S5731-H	S5731-H24T4XC (02352QPP-005)	V200R021C10SPC600
S5731-H	S5731-H48T4XC (02352QPT)	V200R019C00
S5731-H	S5731-H48T4XC (02352QPT-003)	V200R020C10
S5731-H	S5731-H48T4XC (02352QPT-007)	V200R021C10SPC600
S5731S-H	S5731S-H24T4S-A (02353DJE)	V200R019C00
S5731S-H	S5731S-H24T4S-A (02353DJE-001)	V200R020C10
S5731S-H	S5731S-H24T4S-A (02353DJE-003)	V200R021C10SPC600
S5731S-H	S5731S-H24T4X-A (02353HVH)	V200R019C10
S5731S-H	S5731S-H24T4X-A (02353HVH-001)	V200R020C10
S5731S-H	S5731S-H24T4X-A (02353HVH-003)	V200R021C10SPC600
S5731S-H	S5731S-H24T4XC-A (02352YRG)	V200R019C00

Product	Product Model	First Supported Version
S5731S-H	S5731S-H24T4XC-A (02352YRG-001)	V200R020C10
S5731S-H	S5731S-H24T4XC-A (02352YRG-003)	V200R021C10SPC600
S5731S-H	S5731S-H48T4S-A (02353DJG)	V200R019C00
S5731S-H	S5731S-H48T4S-A (02353DJG-003)	V200R020C10
S5731S-H	S5731S-H48T4S-A (02353DJG-005)	V200R021C10SPC600
S5731S-H	S5731S-H48T4X-A (02353HVJ)	V200R019C10
S5731S-H	S5731S-H48T4X-A (02353HVJ-003)	V200R020C10
S5731S-H	S5731S-H48T4X-A (02353HVJ-005)	V200R021C10SPC600
S5731S-H	S5731S-H48T4XC-A (02352YRF)	V200R019C00
S5731S-H	S5731S-H48T4XC-A (02352YRF-003)	V200R020C10
S5731S-H	S5731S-H48T4XC-A (02352YRF-005)	V200R021C10SPC600
S5732-H	S5732-H24S6Q (02353AJS)	V200R019C00
S5732-H	S5732-H24S6Q (02353AJS-001)	V200R020C10
S5732-H	S5732-H24S6Q (02353AJS-003)	V200R021C10SPC500
S5732-H	S5732-H24S6Q (02353AJS-004)	V200R021C10SPC600
S5732-H	S5732-H24S6Q (02353AJS-005)	V200R021C10SPC600
S5732-H	S5732-H48S6Q (02353AJU)	V200R019C00
S5732-H	S5732-H48S6Q (02353AJU-001)	V200R020C10
S5732-H	S5732-H48S6Q (02353AJU-003)	V200R021C10SPC500

Product	Product Model	First Supported Version
S5732-H	S5732-H48S6Q (02353AJU-004)	V200R021C10SPC600
S5735-S	S5735-S24T4X (98010938)	V200R019C00
S5735-S	S5735-S32ST4X (98010931)	V200R019C00
S5735-S	S5735-S48S4X (98010947)	V200R019C00
S5735-S	S5735-S48T4X (98010941)	V200R019C00
S5735S-S	S5735S-S24T4S-A (98010939)	V200R019C00
S5735S-S	S5735S-S24T4X-A (98010967)	V200R019C10
S5735S-S	S5735S-S32ST4X-A (98010932)	V200R019C00
S5735S-S	S5735S-S48T4S-A (98010942)	V200R019C00
S5735S-S	S5735S-S48T4X-A (98010968)	V200R019C10
S5735S-H	S5735S-H24S4XC-A (98011041)	V200R021C01
S5736-S	S5736-S24S4XC (98011038)	V200R021C01
S5736-S	S5736-S48S4XC (98011042)	V200R021C01

## Panel

Figure 5-67 Panel of the PDC1000S12-DB





1. Lock	2. Indicator	3. Fan air vent	4. Handle
5. Airflow flag (air out)	6. DC power socket	-	-

**Table 5-138** Indicators on the PDC1000S12-DB

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Steady off	The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overvoltage or overtemperature).
		Green	Steady on	The power module output is normal.

## Functions and Features

**Table 5-139** Functions of a 1000 W DC power module

Function	Description
Input protection	Provides protection against input overvoltage, input undervoltage, and input overcurrent.
Output protection	Provides protection against output overvoltage, output overcurrent, and output short circuits.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

 NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

## Technical Specifications

**Table 5-140** Technical specifications of the PDC1000S12-DB

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight without packaging [kg(lb)]	1.02 kg (2.25 lb)
Number of inputs	1
Rated input voltage [V]	-48 V DC to -60 V DC
Input voltage range [V]	-38.4 V DC to -72 V DC
Maximum input current [A]	30 A
Rated output voltage [V]	12 V
Rated output current [A]	83.3 A
Rated output power [W]	1000 W
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

## 5.31 PDC1000S56-EB (1000 W PoE DC Power Module (66 mm Width case, Back to Front, Power panel side exhaust))

### Overview

**Table 5-141** Basic information about the PDC1000S56-EB

Item	Details
Description	1000 W PoE DC Power Module (66 mm Width case, Back to Front, Power panel side exhaust)
Part Number	02313XRB

Item	Details
Model	PDC1000S56-EB

## Appearance

**Figure 5-68** Appearance of the PDC1000S56-EB



### NOTE

Figures in the document are for reference only, and the actual appearance of the devices may vary depending on the exact device model.

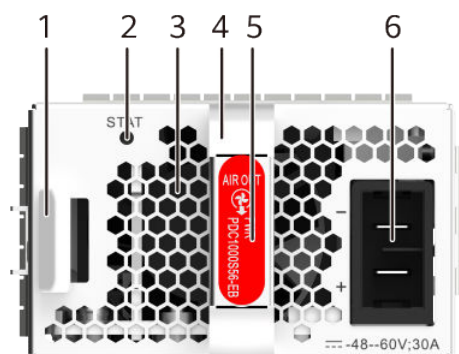
## Version Mapping

**Table 5-142** Mappings between PDC1000S56-EB and product models

Product	Product Model	First Supported Version
S5731-S	S5731-S24UN4X2Q (02354VCC)	V200R022C00
S5731-S	S5731-S8UM16UN2Q (02354VCD)	V200R022C00

## Panel

**Figure 5-69** Panel of the PDC1000S56-EB



1. Lock	2. Running status indicator	3. Air vent hole	4. Handle
5. Airflow flag (air out)	6. Power socket	-	-

**Table 5-143** Indicators on the PDC1000S56-EB

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	Green	Steady on	The power module output is normal.
		Green	Fast blinking (4 Hz)	Online loading

Silkscreen	Name	Color	Status	Description
		-	Steady off	<ul style="list-style-type: none"> <li>The power module is powered on but not inserted into the system.</li> <li>The power module input is normal but there is no output due to power overtemperature protection, output overcurrent, output overvoltage protection, short circuit protection, or component failure.</li> <li>The input is abnormal or there is no output due to no input.</li> </ul>

## Functions and Features

**Table 5-144** Functions and features of the PDC1000S56-EB

Functions and Features	Description
Input undervoltage protection	In this protection state, the power module is turned off and stops supplying power. When the fault is eliminated, the power module can automatically resume power supply.

Functions and Features	Description
Output overvoltage protection	In this protection state, the power output is locked and the power module cannot automatically resume power supply.
Output overcurrent protection	In this protection state, the power module is in hiccup protection mode. If the power module enters this mode multiple times, the power output will be locked and the power module cannot automatically resume power supply.
Output short-circuit protection	In this protection state, the power module is in hiccup protection mode. If the power module enters this mode multiple times, the power output will be locked and the power module cannot automatically resume power supply.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.

## Technical Specifications

**Table 5-145** Technical specifications of the PDC1000S56-EB

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 66 mm x 215 mm (1.57 in. x 2.6 in. x 8.46 in.)
Weight without packaging [kg(lb)]	1 kg (2.20 lb)
Number of inputs	1
Rated input voltage [V]	-48 V DC to -60 V DC
Input voltage range [V]	-38.4 V DC to -72 V DC
Maximum input current [A]	30 A
Rated output voltage [V]	53.5 V or 55.5 V
Rated output current [A]	18.69 A @ 53.5 V, 18.02 A @55.5 V

Item	Specification
Rated output power [W]	1000 W
Power dissipation Mode	Heat dissipation with fan
Hot swapping	Supported

## 5.32 HW-560268D0D (150 W PoE AC Power Adapter)

### Overview

**Table 5-146** Basic information about the HW-560268D0D

Item	Details
Description	150 W PoE AC Power Adapter
Part Number	02221024
Model	HW-560268D0D
Remarks	C8 AC socket

### Appearance

**Figure 5-70** Appearance of the HW-560268D0D



## Version Mapping

**Table 5-147** Mappings between HW-560268D0D and product models

Product	Product Model	First Supported Version
S5731-L-RU	S5731-L4P2HT-RUA (98011776)	V200R021C10SPC500
S5731-L-RU	S5731-L4P2S-RUA (98011772)	V200R021C10SPC500
S5731-L-RU	S5731-L4P2ST-RUA (98011774)	V200R021C10SPC500
S5731-L-RU	S5731-L8LP2ST-RUA (98012186)	V200R022C10
S5731-L-RU	S5731-L8P2HT-RUA (98011782)	V200R021C10SPC500
S5731-L-RU	S5731-L8P2ST-RUA (98011780)	V200R021C10SPC500
S5731S-L-RU	S5731S-L4P2HT-RUA (98011777)	V200R021C10SPC500
S5731S-L-RU	S5731S-L4P2S-RUA (98011773)	V200R021C10SPC500
S5731S-L-RU	S5731S-L4P2ST-RUA (98011775)	V200R021C10SPC500
S5731S-L-RU	S5731S-L8P2HT-RUA (98011783)	V200R021C10SPC500
S5731S-L-RU	S5731S-L8P2ST-RUA (98011781)	V200R021C10SPC500

## Connector

**Figure 5-71** Connectors of the HW-560268D0D





1. Audio connector	2. C8 AC socket
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## Functions and Features

**Table 5-148** Functions of a 150 W AC power adapter

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power adapter stops supplying power. When the input voltage restores to the normal range, the power adapter automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power adapter stops supplying power and cannot automatically resume power supply when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power adapter stops supplying power intermittently. When the output voltage restores to the normal range, the power adapter automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power adapter supplies power intermittently. When the output current is within a range, the power adapter automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power adapter supplies power intermittently. When the short circuit is removed, the power adapter automatically resumes power supply.
Overtemperature protection		When the temperature of the power adapter exceeds a specified threshold, the power adapter stops supplying power. When the temperature falls into the normal range, the power adapter automatically resumes power supply.
Hot swapping		Supported

### NOTE

When a power adapter enters overtemperature protection state, take measures to lower the ambient temperature. The power adapter can automatically start supplying power again when the temperature falls within the normal range.

## Technical Specifications

**Table 5-149** Technical specifications of the HW-560268D0D

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	42 mm x 80 mm x 180 mm (1.65 in. x 3.15 in. x 7.09 in.)
Weight without packaging [kg(lb)]	0.75 kg (1.65 lb)
Number of inputs	1
Rated input voltage [V]	100 V AC to 240 V AC, 50/60 Hz
Input voltage range [V]	90 V AC to 290 V AC, 47 Hz to 63 Hz
Maximum input current [A]	2 A
Rated output voltage [V]	56 V
Rated output current [A]	2.68 A
Rated output power [W]	150 W
Power dissipation Mode	Natural heat dissipation without fans
Hot swapping	Supported

## 5.33 RPS1800 Redundant Power Supply (6 DC Output Ports, 12V Total Output Power 140W, 48V Total Output Power 1600W)

### Overview

**Table 5-150** Basic information about the RPS1800

Item	Details
Description	RPS1800 Redundant Power Supply (6 DC Output Ports, 12V Total Output Power 140W, 48V Total Output Power 1600W)
Part Number	02353857
Model	RPS1800

## Appearance

Figure 5-72 Appearance of an RPS1800 power supply



## Product Mapping

Table 5-151 Mapping between switch models and the RPS1800 power supply

Power Module Name	Product Support
RPS1800 power supply	S5700-LI, S5700S-LI, S5710-X-LI, S5720-X-LI, S5720-P-LI, S5720S-SI, S5720-X-EI, S5720-P-EI, S5720S-28X-LI-24S-AC, S5720-28X-SI-24S-AC, S5720-28X-SI-24S-DC, and S5700-26X-SI-12S-AC  <b>NOTE</b> The S5720-16X-PWH-LI-AC, S5700-10P-PWR-LI-AC, and S5700-10P-LI-AC do not support the RPS.

## Panel

Figure 5-73 Front view of an RPS1800 power supply

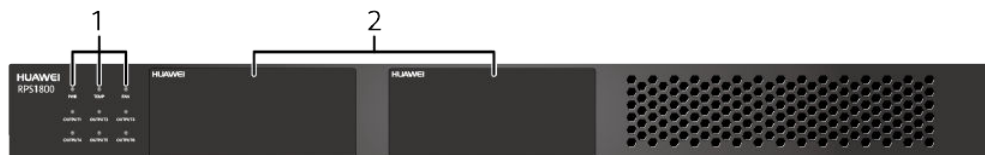
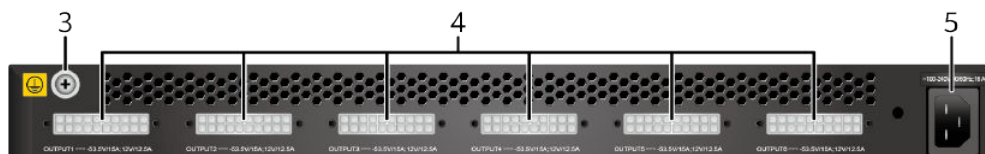


Figure 5-74 Rear view of an RPS1800 power supply



1. RPS power indicators	2. Two swappable power module slots  <b>NOTE</b> 870 W PoE power modules can be installed in the slots.	3. Ground screw	4. Six DC output ports  <b>NOTE</b> The DC output ports connect to switches through RPS cables.	5. AC power socket  <b>NOTE</b> The AC power socket connects to an AC power source through an RPS1800 power cable.
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**Table 5-152** Indicators on the panel of an RPS1800 power supply

Indicator	Color	Description
PWR	Green	Steady on: The power input is in normal range.
	-	Off: The switch is powered off.
TEMP	Green	Steady on: The temperature is in normal range.
	Red	Steady on: The temperature is out of range.
	-	Off: The switch is powered off.
FAN	Green	Steady on: The fan module runs properly.
	-	Off: The switch is powered off.
OUTPUT	Green	Steady on: The RPS power supply is in cold backup state. Blinking: The RPS power supply is providing power.
	Orange	Steady on: The RPS power supply is providing power for one or more switches and is therefore unavailable to supply power for more switches.
	-	Off: The switch is powered off.

## Functions and Features

The RPS1800 is a redundant power supply that ensures seamless failover if the internal power module of a switch fails. The RPS1800 can detect the failure of the internal power module on a connected switch and immediately supply power to this switch. The switch can continue operating without a restart.

The RPS1800 has the following features:

- For non-PoE switches, the RPS1800 can provide 6:1 power redundancy without an 870 W PoE power module:

- The RPS1800 can connect to a maximum of six switches and ensure seamless failover for at most one switch if the internal power module of the switch fails.
- When the internal power module of the switch powered by the RPS1800 recovers, the RPS1800 immediately returns to the backup state.
- Among the six DC output ports, port 1 has the highest priority, and the other ports have the same priority. When the RPS1800 connects to six switches, the switch connected to port 1 preferentially receives power from the RPS1800.
- For S5700-LI and S5700S-LI PoE switches, the RPS1800 supports the forcible PoE power supply mode (default) and the 6:1 power cold redundancy mode.  
Forcible PoE power supply mode:
  - The RPS1800 must be configured with one or two 870 W PoE power modules.
  - The forcible PoE power supply mode is the default mode for the PoE switches connected to the RPS1800. In this mode, the RPS1800 provides PoE power supply to the PoE switches. When configured with one 870 W PoE power module, the RPS1800 can provide PoE power supply for only one PoE switch. When configured with two 870 W PoE power modules, the RPS1800 can provide PoE power supply for two PoE switches, 800 W PoE power for each switch.
  - The PoE power provided by the RPS1800 and the PoE power of a switch's internal power modules do not accumulate. That is, when a PoE switch is connected to the RPS1800, its maximum PoE power is 800 W.
  - When using 110 V power input, each 870 W PoE power module can provide only 400 W of PoE power. In this case, an RPS1800 must be configured with two 870 W PoE power modules if it is used to provide PoE power supply. Additionally, only one port of the RPS1800 can provide PoE power supply for a switch.
  - The RPS1800 provides power redundancy for system and PoE power modules of the connected PoE switches. However, it can provide power redundancy for only two PoE switches at the same time.
  - The six DC output ports have the same priority.
  - You can use the **rps cold-backup** command to switch to the 6:1 power cold redundancy mode. The S5700-28P-PWR-LI-AC and S5700-52P-PWR-LI-AC do not support the 6:1 power cold redundancy mode.6:1 power cold redundancy mode:
  - If the RPS1800 has no 870 W PoE power module, it provides the same functions for PoE switches as it does for non-PoE switches.
  - If the RPS1800 has 870 W PoE power modules installed, it provides power redundancy for the system and PoE power modules of PoE switches but does not provide forcible PoE power supply for the switches.
  - The RPS1800 can provide PoE power redundancy for only one switch at a time. It requires only one 870 W PoE power module when using 220 V power input and requires two 870 W PoE power module when using 110 V power input.
- For S5720-LI PoE switches, the RPS1800 supports the 6:1 power cold redundancy mode.

6:1 power cold redundancy mode:

- If the RPS1800 has no 870 W PoE power module, it provides the same functions for PoE switches as it does for non-PoE switches.
- If the RPS1800 has 870 W PoE power modules installed, it provides power redundancy for the system and PoE power modules of PoE switches but does not provide forcible PoE power supply for the switches.
- The RPS1800 can provide PoE power redundancy for only one switch at a time. It requires only one 870 W PoE power module when using 220 V power input and requires two 870 W PoE power module when using 110 V power input.

**NOTE**

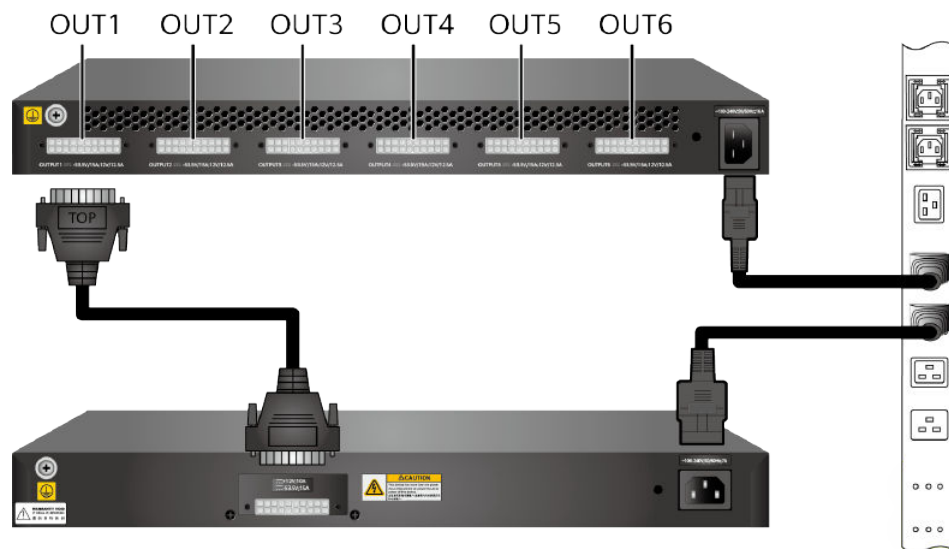
The 870 W PoE power modules and RPS cables are not hot swappable.

The RPS1800 only provides power redundancy for switches and cannot power on a switch directly.

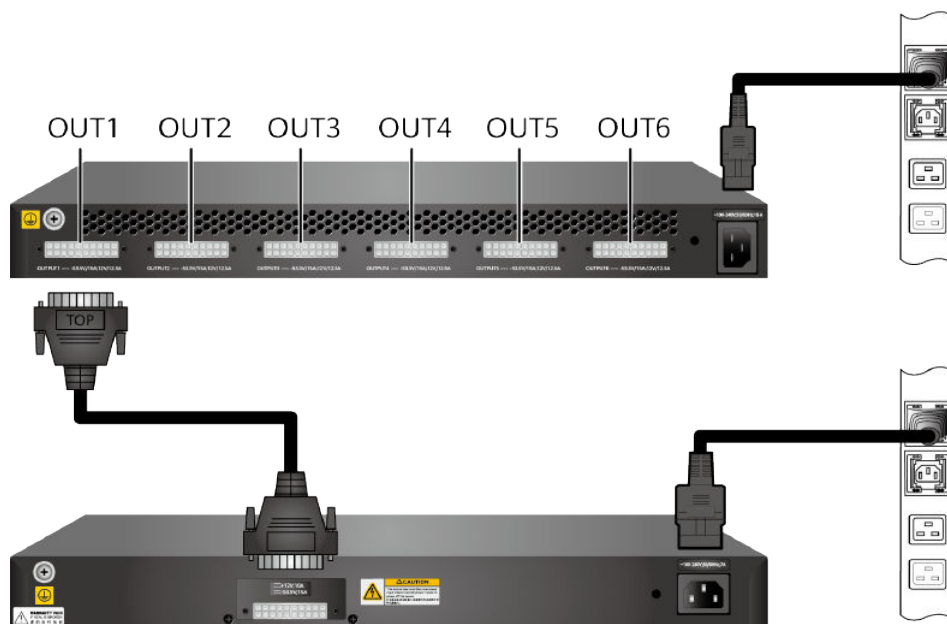
The RPS1800 can be deployed on various networks to ensure non-stop operation of the networks. [Figure 5-75](#) and [Figure 5-76](#) show different deployments of the RPS1800.

When an RPS1800 uses the same external power supply system as the connected switches, it can prevent service interruption caused by failures of the switches' internal power modules. When an RPS1800 uses a different external power supply system than the connected switches, it can prevent service interruption caused by failures of switches' internal power modules and external power supply system. Therefore, this deployment is more reliable.

**Figure 5-75** Same external power supply system for RPS1800 and connected switches



**Figure 5-76** Different external power supply systems for RPS1800 and connected switches

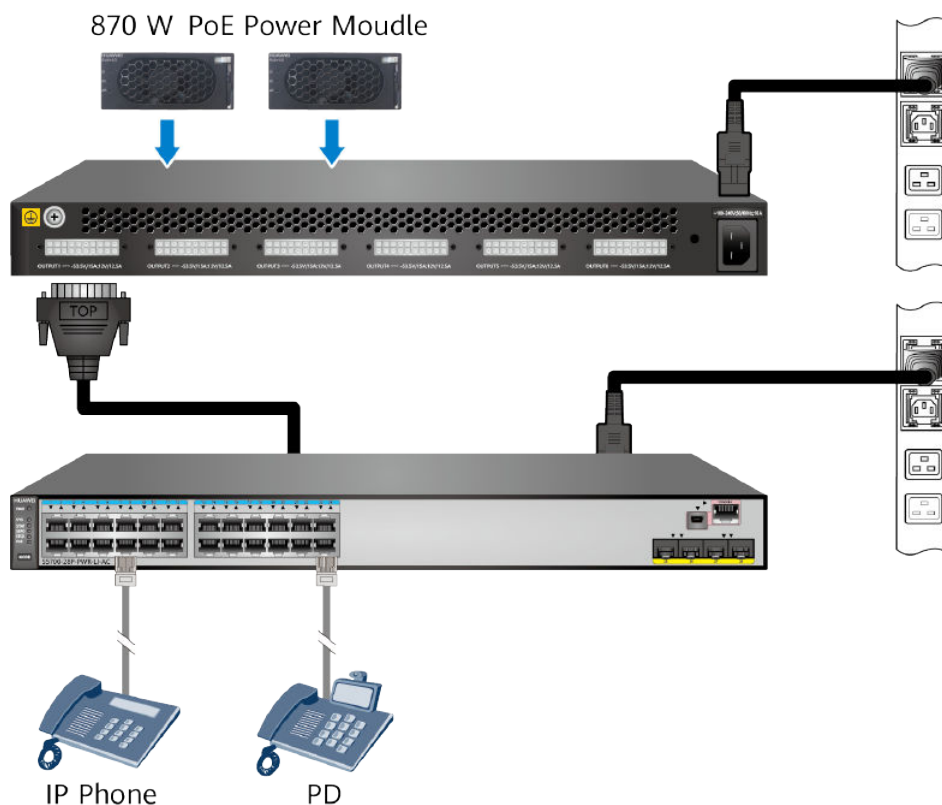


If one of switches connected to the RPS1800 encounters an internal power module failure, the RPS1800 provides seamless failover for the switch. Then the RPS1800 does not provide power backup for the other switches connected until the internal power module of the faulty switch is recovered or replaced.

If more than one connected switch has an internal power module failure, the RPS1800 preferentially provides power for the switch connected to port 1. If the switch connected to port 1 has an internal power module failure when the RPS1800 is providing power for a switch connected to another port, the RPS1800 immediately stops supplying power for this switch and starts providing power to the switch connected to port 1.

If the RPS1800 has 870 W PoE power modules installed, it can provide PoE power for PoE switches, as shown in [Figure 5-77](#).

**Figure 5-77** PoE power supply for connected switches



## Technical Specifications

**Table 5-153** Technical specifications of the RPS1800

Item	Description (Without Power Modules Installed)	Description (with One Power Module Installed)	Description (with Two Power Modules Installed)
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)		
Weight	4.0 kg	5.5 kg	7.0 kg
Operating temperature	0°C to 50°C (at 0-2000 m altitude)		
Storage temperature	-40°C to +70°C		
Relative humidity	5% RH to 95% RH, noncondensing		



Item	Description (Without Power Modules Installed)	Description (with One Power Module Installed)	Description (with Two Power Modules Installed)
Airflow direction	Air flows in through the DC output ports side and flows out through the power module side.		
Rated input voltage	220/110 V AC, 50/60 Hz		
Input voltage range	200 V AC to 240 V AC (220 V rated voltage input)/100 V AC to 120 V AC (110 V rated voltage input), 50/60 Hz		
Input current	12 A		
Maximum output current	12 V: 11.5 A	<ul style="list-style-type: none"> <li>12 V: 11.5 A</li> <li>-53.5 V: 15 A (input voltage range: 200 V AC to 240 V AC)</li> </ul>	<ul style="list-style-type: none"> <li>12 V: 11.5 A</li> <li>-53.5 V: 15 A output per port (input voltage range: 200 V AC to 240 V AC)</li> <li>-53.5 V: 15 A output per port (input voltage range: 100 V AC to 120 V AC, two 870 W PoE power modules required)</li> </ul>
Maximum output power	12 V: 140 W	<ul style="list-style-type: none"> <li>12 V: 140 W</li> <li>-53.5 V: 800 W (input voltage range: 200 V AC to 240 V AC)</li> </ul>	<ul style="list-style-type: none"> <li>12 V: 140 W</li> <li>-53.5 V: 1600 W (input voltage range: 200 V AC to 240 V AC)</li> <li>-53.5 V: 800 W (input voltage range: 100 V AC to 120 V AC, two 870 W PoE power modules required)</li> </ul>

 **NOTE**

Each interface of the RPS provides a maximum of 140 W power for the device and 800 W PoE power for PDs.

## 5.34 LS5W2PSA0870 (870 W PoE Power Module, Rectifier 15 A)

### Overview

**Table 5-154** Basic information about the LS5W2PSA0870

Item	Details
Description	870 W PoE Power Module, Rectifier 15 A
Part Number	02310LGV
Model	LS5W2PSA0870

### Product Mapping

**Table 5-155** RPS1800 matching an 870 W PoE power module

Power Module Name	Product Support
LS5W2PSA0870	Supported only in the RPS1800

### Appearance

**Figure 5-78** Appearance of an 870 W PoE power module



### Functions and Features

An 870 W PoE power module can be configured on the RPS1800 to convert 100 V AC to 240 V AC power input into -53.5 V DC default power output. The functions

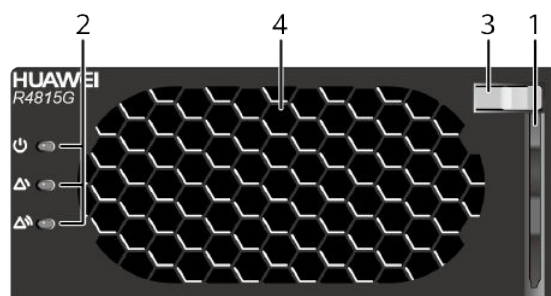
of the power module are described in [Table 5-156](#). When the RPS1800 is configured with one 870 W PoE power module, it provides 800 W of PoE power for connected devices. It can be configured with a maximum of two 870 W PoE power modules to provide 1600 W of PoE power for connected devices.

**Table 5-156** Functions of an 870 W PoE power module

Function	Description
Input protection	Input undervoltage and overvoltage protection is provided.
Output protection	Output overvoltage, overcurrent, and short-circuit protection is provided.
Overtemperature protection	-
Hot swapping	Not supported

## Panel Description




**Figure 5-79** Panel of an 870 W PoE power module



1. Extensible handle	2. Power status indicator	3. Slide pinch	4. Fan
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[Table 5-157](#) describes indicators on an 870 W PoE power module panel.

**Table 5-157** Description of indicators on an 870 W PoE power module panel

Indicator	Color	Description
Power indicator 	Green	Off: No AC input power is provided or the power module is faulty. Steady on: AC input power is provided. Slow blinking: The power module is in manual query state. Fast blinking: Applications are being loaded on the power module.
Alarm indicator 	Yellow	Off: No alarm has been triggered on the power module. Steady on: <ul style="list-style-type: none"> <li>• A power alarm has been generated due to ambient overtemperature.</li> <li>• A power-off alarm has been triggered by high or low ambient temperature.</li> <li>• Input undervoltage and overvoltage occur.</li> <li>• The power module is in dormant state.</li> </ul> Blinking: The power module disconnects from the RPS1800.
Fault indicator 	Red	Off: No fault exists on the power module. Steady on: The power output is locked because of output overvoltage or no power output is provided because the power module is faulty.

## Technical Specifications

**Table 5-158** Technical specifications of the LS5W2PSA0870

Item	Description
Dimensions (H x W x D)	40.8 mm x 95.5 mm x 208.0 mm (1.61 in. x 3.76 in. x 8.19 in.)
Weight	< 1.5 kg
Rated input voltage	220/110 V AC, 50/60 Hz
Maximum input voltage range	200 V AC to 240 V AC (220 V rated voltage input)/100 V AC to 120 V AC (110 V rated voltage input), 47 Hz to 63 Hz
Input current	4.7 A

Item	Description
Maximum output power	<ul style="list-style-type: none"><li>• 870 W (voltage range: 200 V to 240 V)</li><li>• 435 W (voltage range: 100 V to 120 V)</li></ul>

# 6 Battery Modules

- [6.1 BAT-4AHA \(Chargeable Lithium Battery\)](#)
- [6.2 BAT-8AHA \(Chargeable Lithium Battery\)](#)
- [6.3 PBB-12AHA \(12AH Lead-Acid Battery Charger Module\)](#)

## 6.1 BAT-4AHA (Chargeable Lithium Battery)

### Product Support

[Table 6-1](#) provides the product support for the BAT-4AHA battery.

**Table 6-1** Product support for the BAT-4AHA battery

Battery Name	Product Support
BAT-4AHA	S5700-LI-BAT Series

### Appearance

[Figure 6-1](#) shows a BAT-4AHA battery.

**Figure 6-1** BAT-4AHA battery



## Function

**Table 6-2** describes the functions of a BAT-4AHA battery.

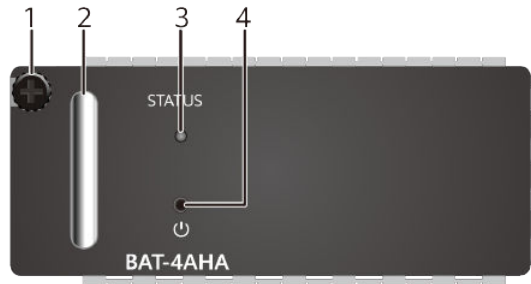
**Table 6-2** Functions of a BAT-4AHA battery

Function	Description
Power redundancy	The BAT-4AHA battery can be installed in the battery slot at the rear of an S5700-LI-BAT switch to provide power redundancy. When the external power supply system fails, the battery powers the switch to ensure uninterrupted services.
Protection	The BAT-4AHA battery provides various protection functions, including charge overvoltage protection, charge overcurrent protection, discharge overcurrent protection, undervoltage protection, and short-circuit protection.
Alarm reporting	The BAT-4AHA battery can report alarms on low-power state, low/high temperature, battery failures, and power supply time.
Command line configuration	You can configure the power supply time alarm threshold for the BAT-4AHA battery and turn off the battery using commands.
Overtemperature protection	The battery enters the overtemperature protection state when the charge temperature is out of the range of -5°C to +55°C or when the discharge temperature is out of the range of -10°C to +65°C. The battery restores to the operation state when the charge temperature restores to the range of 0°C to 50°C or the discharge temperature restores to the range of -5°C to +60°C.
Visualized management	You can use the web-based management system to check the battery status and manage the battery.
In-service software upgrade	In V200R005C00 to V200R010C00 versions, the lithium battery software can be upgraded using the <b>upgrade battery-app</b> command.
Hot swapping	The battery is hot swappable.

## Panel

**Figure 6-2** shows the panel of a BAT-4AHA battery.

**Figure 6-2** BAT-4AHA battery panel





1. Captive screw	2. Handle	3. Battery indicator	<p>4. Battery switch button</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• The switch button is invalid when the battery is not installed in the switch.</li> <li>• If the switch is powered by an AC power supply system, you do not need to turn on the lithium battery by holding down this button after installing the battery in the switch. The lithium battery works in backup mode automatically after it is installed.</li> <li>• If the switch is not connected to an AC power supply system, install the lithium battery, and then hold down this button for 1s to turn on the battery so that the battery starts to power the switch.</li> <li>• You can hold down this button for 1s to turn off the lithium battery only when the switch has no AC power input.</li> </ul>
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**Table 6-3** describes the indicator on the BAT-4AHA battery panel.

**Table 6-3** Description of the BAT-4AHA battery indicator

Indicator	Color	Description
STATUS	Off	<ul style="list-style-type: none"> <li>The lithium battery is not connected to the switch.</li> <li>The lithium battery is faulty or its temperature is abnormal.</li> </ul>
	Green	<ul style="list-style-type: none"> <li>Steady on: The lithium battery has been fully charged and is working in backup state.</li> <li>Fast blinking: The lithium battery is supplying power to the switch.</li> <li>Slow blinking: The switch is charging the lithium battery.</li> </ul>

## Specifications

**Table 6-4** lists specifications of a BAT-4AHA battery.

**Table 6-4** Specifications of a BAT-4AHA battery

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.8 kg (1.76 lb)
Charge voltage range	10.8 V DC to 14 V DC
Discharge voltage range	9 V DC to 12.45 V DC
Maximum charge current	1.25 A
Maximum discharge power	50 W; typical: 40 W
Charge environment temperature	0°C to 45°C (32°F to 113°F)
Discharge environment temperature	-5°C to +50°C (23°F to 122°F)
Storage temperature	-20°C to +60°C (-4°F to 140°F)

Item	Description
Relative humidity	5% RH to 95% RH, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Maximum storage time (fully charged, no charging)	6 months: < 40°C (104°F); recommended temperature: 20°C to 30°C (68°F to 86°F)
Storage requirements	<b>NOTICE</b> A lithium battery must be charged after the maximum storage time; otherwise, the battery service life decreases or the battery is damaged. <ul style="list-style-type: none"><li>• The storage environment must comply with ETS 300 029-1-1 and CLASS 1.2.</li><li>• The storage environment must be free from acidic, alkaline, or other corrosive gases.</li><li>• Keep a lithium battery away from direct sunlight and more than 2 m from heat sources.</li><li>• Do not place a battery upside down and avoid collision or stress on the battery.</li></ul>
Rated capacity	4 AH
Life time	> 4 years <b>NOTE</b> The battery life time is obtained under the following condition: The temperature is 20°C to 30°C, and the discharge capacity of the battery exceeds 50% for no more than once a day.
EMC	<ul style="list-style-type: none"><li>• EN55022</li><li>• EN55024</li></ul>
Environmental standards	RoHS
Safety	<ul style="list-style-type: none"><li>• EN 60950-1: 2006</li><li>• EN 62133: 2003</li></ul>
Transportation	UN38.3
Part number	24021354

## 6.2 BAT-8AHA (Chargeable Lithium Battery)

### Product Support

[Table 6-5](#) provides the product support for the BAT-8AHA battery.

**Table 6-5** Product support for the BAT-8AHA battery

Battery Name	Product Support
BAT-8AHA	S5700-LI-BAT Series

## Appearance

Figure 6-3 shows a BAT-8AHA battery.

**Figure 6-3** BAT-8AHA battery



## Function

Table 6-6 describes the functions of a BAT-8AHA battery.

**Table 6-6** Functions of a BAT-8AHA battery

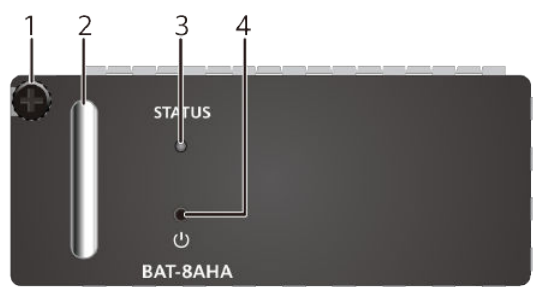
Function	Description
Power redundancy	The BAT-8AHA battery can be installed in the battery slot at the rear of an S5700-LI-BAT switch to provide power redundancy. When the external power supply system fails, the battery powers the switch to ensure uninterrupted services.
Protection	The BAT-8AHA battery provides various protection functions, including charge overvoltage protection, charge overcurrent protection, discharge overcurrent protection, undervoltage protection, and short-circuit protection.
Alarm reporting	The BAT-8AHA battery can report alarms on low-power state, low/high temperature, battery failures, and power supply time.

Function	Description
Command line configuration	You can configure the power supply time alarm threshold for the BAT-8AHA battery and turn off the battery using commands.
Overtemperature protection	The battery enters the overtemperature protection state when the charge temperature is out of the range of -5°C to +55°C or when the discharge temperature is out of the range of -10°C to +65°C. The battery restores to the operation state when the charge temperature restores to the range of 0°C to 50°C or the discharge temperature restores to the range of -5°C to +60°C.
Visualized management	You can use the web-based management system to check the battery status and manage the battery.
In-service software upgrade	In V200R005C00 to V200R010C00 versions, the lithium battery software can be upgraded using the <b>upgrade battery-app</b> command.
Hot swapping	The battery is hot swappable.

## Panel

Figure 6-4 shows the panel of a BAT-8AHA battery.

Figure 6-4 BAT-8AHA battery panel



1. Captive screw	2. Handle	3. Battery indicator	4: Battery switch button  <b>NOTE</b> <ul style="list-style-type: none"> <li>• The switch button is invalid when the battery is not installed in the switch.</li> <li>• If the switch is powered by an AC power supply system, you do not need to turn on the lithium battery by holding down this button after installing the battery in the switch. The lithium battery works in backup mode automatically after it is installed.</li> <li>• If the switch is not connected to an AC power supply system, install the lithium battery, and then hold down this button for 1s to turn on the battery so that the battery starts to power the switch.</li> <li>• You can hold down this button for 1s to turn off the lithium battery only when the switch has no AC power input.</li> </ul>
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**Table 6-7** describes the indicator on the BAT-8AHA battery panel.

**Table 6-7** Description of the BAT-8AHA battery indicator

Indicator	Color	Description
STATUS	Off	<ul style="list-style-type: none"> <li>The lithium battery is not connected to the switch.</li> <li>The lithium battery is faulty or its temperature is abnormal.</li> </ul>
	Green	<ul style="list-style-type: none"> <li>Steady on: The lithium battery has been fully charged and is working in backup state.</li> <li>Fast blinking: The lithium battery is supplying power to the switch.</li> <li>Slow blinking: The switch is charging the lithium battery.</li> </ul>

## Specifications

**Table 6-8** lists specifications of a BAT-8AHA battery.

**Table 6-8** Specifications of a BAT-8AHA battery

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	1.1 kg (2.43 lb)
Charge voltage range	10.8 V DC to 14 V DC
Discharge voltage range	9 V DC to 12.45 V DC
Maximum charge current	1.25 A
Maximum discharge power	80 W; typical: 45 W
Charge environment temperature	0°C to 45°C (32°F to 113°F)
Discharge environment temperature	-5°C to +50°C (23°F to 122°F)
Storage temperature	-20°C to +60°C (-4°F to 140°F)

Item	Description
Relative humidity	5% RH to 95% RH, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Maximum storage time (full power, no charging)	6 months < 40°C (104°F); recommended temperature: 20°C to 30°C (68°F to 86°F)
Storage requirements	<b>NOTICE</b> A lithium battery must be charged after the maximum storage time; otherwise, the battery service life decreases or the battery is damaged. <ul style="list-style-type: none"><li>• The storage environment must comply with ETS 300 029-1-1 and CLASS 1.2.</li><li>• The storage environment must be free from acidic, alkaline, or other corrosive gases.</li><li>• Keep a lithium battery away from direct sunlight and more than 2 m from heat sources.</li><li>• Do not place a battery upside down and avoid collision or stress on the battery.</li></ul>
Rated capacity	8 AH
Life time	> 4 years <b>NOTE</b> The battery life time is obtained under the following condition: The temperature is 20°C to 30°C, and the discharge capacity of the battery exceeds 50% for no more than once a day.
EMC	<ul style="list-style-type: none"><li>• EN55022</li><li>• EN55024</li></ul>
Environmental standards	RoHS
Safety	<ul style="list-style-type: none"><li>• EN 60950-1: 2006</li><li>• EN 62133: 2003</li></ul>
Transportation	UN38.3
Part number	24021356

## 6.3 PBB-12AHA (12AH Lead-Acid Battery Charger Module)

### Product Support

[Table 6-9](#) provides the product support for the PBB-12AHA lead-acid battery charger module.



**Table 6-9** Product support for the PBB-12AHA lead-acid battery charger module

Module Name	Product Support
PBB-12AHA	S5700-LI-BAT Series

## Appearance

**Figure 6-5** shows a PBB-12AHA lead-acid battery charger module.

**Figure 6-5** PBB-12AHA lead-acid battery charger module

## Function

**Table 6-10** describes the functions of a PBB-12AHA lead-acid battery charger module.

**Table 6-10** Functions of a PBB-12AHA lead-acid battery charger module

Function	Description
Connecting to an external lead-acid battery	<p>The PBB-12AHA can be installed in the battery slot at the rear of an S5700-LI-BAT switch. It connects to a lead-acid battery to provide power redundancy. The PBB-12AHA has a BAT port on the panel, which can connect to a lead-acid battery to supply power to the switch.</p> <p>A switch can be powered on using a lead-acid battery charger module and a lead-acid battery. Install the lead-acid battery charger module in the switch, and then connect the lead-acid battery to the charger module.</p>

Function	Description
Alarm reporting	The PBB-12AHA module supports alarms about the lead-acid-battery, including low-power alarm, low-power clear alarm, and full-power alarm.
Protection	The BAT port can prevent the power cable connector from being reversely inserted.
Temperature compensation	The PBB-12AHA has a sensor port on the panel, which can connect to a sensor for temperature compensation during charging of a lead-acid battery.
Charging	The PBB-12AHA can charge the lead-acid battery connected to it.
Hot swapping	The PBB-12AHA is hot swappable.

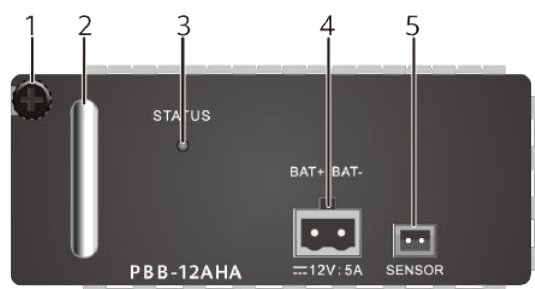
The lead-acid battery (separately purchased) connected to the PBB-12AHA lead-acid battery charger module must meet the following requirements:

- The input voltage is 12 V.
- The rated capacity of the lead-acid battery is 12 ampere-hour.

## Panel

**Figure 6-6** shows the panel of a PBB-12AHA lead-acid battery charger module.

**Figure 6-6** PBB-12AHA lead-acid battery charger module panel



1. Captive screw	2. Handle	3. Indicator
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<p>4. Lead-acid battery input port</p> <p><b>NOTE</b> Power cables of the lead-acid battery are connected to this port through a connector (delivered with the PBB-12AHA). You need to purchase power cables with a diameter of 14 AWG to 12 AWG.</p>	<p>5. Temperature sensor port</p> <p><b>NOTE</b> A lead-acid battery temperature sensor can connect to this port to monitor temperature of the lead-acid battery. The lead-acid battery temperature sensor can be purchased from Huawei if needed.</p>	-
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**Table 6-11** describes the indicator on a PBB-12AHA lead-acid battery charger module.

**Table 6-11** Description of the indicator on a PBB-12AHA lead-acid battery charger module

Indicator	Color	Description
STATUS	Green	<ul style="list-style-type: none"> <li>Off: No lead-acid battery is connected to the PBB-12AHA module.</li> <li>Steady on: A lead-acid battery is connected to the PBB-12AHA module.</li> </ul>

## Specifications

**Table 6-12** lists specifications of a PBB-12AHA lead-acid battery charger module.

**Table 6-12** Specifications of a PBB-12AHA lead-acid battery charger module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.48 kg (1.06 lb)
Charge voltage range	10.8 V DC to 13.8 V DC
Discharge voltage range	10.8 V DC to 13.6 V DC
Charge current	<ul style="list-style-type: none"> <li>S5700-28P-LI-BAT: maximum value 1.25 A; typical value 1.0 A</li> <li>S5700-28P-LI-24S-BAT: maximum value 2.0 A; typical value 1.8 A</li> </ul>
Maximum discharge power	80 W; typical: 60 W

Item	Description
Part number	98010517

# 7 Fan Modules

If one fan module (including the built-in fan module) of a switch is faulty, the other fan modules run at full speed to ensure proper heat dissipation and normal operation of the system.

[7.1 CX7E1FANA Fan Module](#)

[7.2 FAN-028A-B Fan Module](#)

[7.3 FAN-40EA-B Fan Module](#)

[7.4 FAN-023A-B \(Fan box\(B,FAN panel side exhaust\)\)](#)

[7.5 FAN-031A-B \(Fan box\(B,FAN panel side exhaust\)\)](#)

[7.6 FAN-031A-F \(Fan box \(F, FAN panel side intake\)\)](#)

[7.7 FAN-060B-B \(Fan box \(B, FAN panel side exhaust\)\)](#)

## 7.1 CX7E1FANA Fan Module

### Product Support

**Table 7-1** lists the switch chassis matching a CX7E1FANA fan module.

**Table 7-1** Switch chassis matching a CX7E1FANA fan module

Fan Module Name	Product Support
CX7E1FANA fan module	S5700-28C-SI, S5700-52C-SI, S5700-28C-PWR-SI, S5700-52C-PWR-SI, S5700-24TP-PWR-SI, S5700-48TP-PWR-SI, S5700-EI, and S5710-C-LI

### Appearance

**Figure 7-1** shows the appearance of a CX7E1FANA fan module.

**Figure 7-1** Appearance of a CX7E1FANA fan module



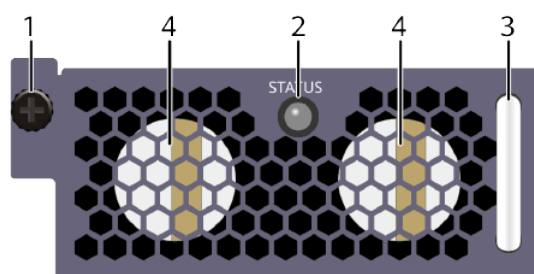
## Function

A CX7E1FANA fan module has two fans to cool the chassis. A CX7E1FANA fan module is hot swappable.

## Panel Description

**Figure 7-2** shows the panel of a CX7E1FANA fan module.

**Figure 7-2** Panel of a CX7E1FANA fan module



1. Captive screw	2. Fan module indicator	3. Handle	4. Two fans <b>NOTE</b> Air is exhausted from air vents on the panel.
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**Table 7-2** shows indicators on the CX7E1FANA fan module panel.

**Table 7-2** Description of indicators on the CX7E1FANA fan module panel

Indicator	Color	Description
STATUS	Off	The fan module is not running.

Indicator	Color	Description
	Green	<ul style="list-style-type: none"> <li>• Slow blinking: The fan module is working properly and its communication is normal.</li> <li>• Fast blinking: The fan module is working properly but its communication is abnormal.</li> </ul>
	Red	<ul style="list-style-type: none"> <li>• Steady on: The fan module has a hardware fault and needs to be replaced.</li> <li>• Slow blinking: An alarm has been generated and needs to be handled. Common causes of this alarm include errors of dual in-line package (DIP) switches, short-circuit, fan blades blocked, and other fan module faults.</li> </ul>

## Specifications

**Table 7-3** describes technical specifications of a CX7E1FANA fan module.

**Table 7-3** Technical specifications of a CX7E1FANA fan module

Item	Description
Dimensions (H x W x D)	39.6 mm x 103 mm x 99.2 mm
Weight	250±20 g
Maximum power consumption	12 W
Maximum wind pressure	375 Pa
Maximum airflow	40 CFM
Operating voltage range	12 V DC
Part number	02351651

## 7.2 FAN-028A-B Fan Module

### Product Support

**Table 7-4** lists the switch chassis matching a FAN-028A-B fan module.

**Table 7-4** Switch chassis matching a FAN-028A-B fan module

Fan Module Name	Product Support
FAN-028A-B	S5720-C-EI, S5720-PC-EI, S5730-SI, S5730S-EI series, and S5730-36C-HI, S5730-36C-PWH-HI, S5730-60C-HI, S5730-60C-PWH-HI, S5730-36C-HI-24S

## Appearance

**Figure 7-3** Appearance of a FAN-028A-B fan module

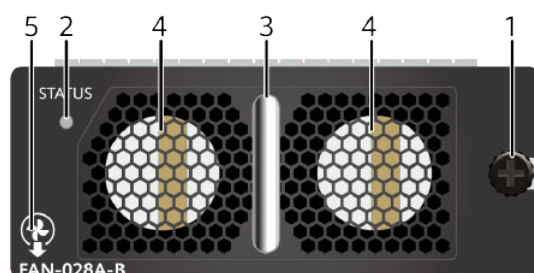


## Function

A FAN-028A-B fan module has two fans to cool the chassis. It is hot swappable.

## Panel

**Figure 7-4** Panel of a FAN-028A-B fan module



1. Captive screw	2. Indicator	3. Handle	4. Two fans	5: Airflow flag (air out)
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**Table 7-5** describes the indicator on a FAN-028A-B fan module panel.



**Table 7-5** Description of the indicator on a FAN-028A-B fan module panel

Indicator	Color	Description
STATUS: running status indicator	Off	The fan module is not running.
	Green	Slow blinking: Fans are working properly.
	Red	Steady on: The fan module has a hardware fault and needs to be replaced.

## Specifications

**Table 7-6** describes technical specifications of a FAN-028A-B fan module.

**Table 7-6** Technical specifications of a FAN-028A-B fan module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 220 mm (1.57 in. x 3.94 in. x 8.66 in.)
Number of fans	2
Weight	0.34 kg
Maximum power consumption	12 W
Rated fan speed	16000±10% revolutions per minute (RPM)
Maximum airflow	28 cubic feet per minute (CFM)
Part number	02359595

## 7.3 FAN-40EA-B Fan Module

### Product Support

**Table 7-7** lists the switch chassis matching a FAN-40EA-B fan module.

**Table 7-7** Mapping between device models and the FAN-40EA-B module

Fan Module Name	Product Support
FAN-40EA-B	S5710-108C-PWR-HI

## Appearance

**Figure 7-5** shows the appearance of a FAN-40EA-B fan module.

**Figure 7-5** Appearance of a FAN-40EA-B fan module



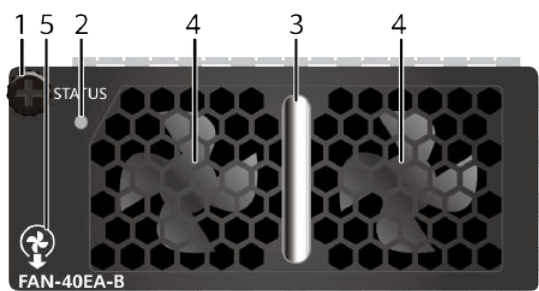
## Function

A FAN-40EA-B fan module has two fans to cool the chassis. A FAN-40EA-B fan module is hot swappable.

## Panel

**Figure 7-6** shows the panel of a FAN-40EA-B fan module.

**Figure 7-6** Panel of a FAN-40EA-B fan module



1. Captive screw	2. Indicator	3. Handle	4. Two fans	5: Airflow flag (air out)
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**Table 7-8** describes the indicators on the FAN-40EA-B fan module panel.

**Table 7-8** Description of indicators on the FAN-40EA-B fan module panel

Indicator	Color	Description
STATUS	Off	The fan module is not running.
	Green	<ul style="list-style-type: none"> <li>• Slow blinking: The fan module is working and communicating normally with the system.</li> <li>• Fast blinking: The fan module is working but is not communicating normally with the system.</li> </ul>
	Red	<ul style="list-style-type: none"> <li>• Steady on: The fan module has a hardware fault and needs to be replaced.</li> <li>• Slow blinking: An alarm has been generated and needs to be handled. Common causes of this alarm include errors of dual in-line package (DIP) switches, short-circuit, fan blades blocked, and other fan module faults.</li> </ul>

## Specifications

**Table 7-9** lists technical specifications of a FAN-40EA-B fan module.

**Table 7-9** Technical specifications of a FAN-40EA-B fan module

Item	Description
Dimensions (H x W x D)	40.0 mm x 94.5 mm x 183.1 mm
Number of fans	2
Weight	0.325 kg
Maximum power consumption	12.71 W
Maximum speed	18500±10% revolutions per minute (RPM)
Maximum airflow	46 cubic feet per minute (CFM)
Part number	02355338

## 7.4 FAN-023A-B (Fan box(B,FAN panel side exhaust))

### Overview

**Table 7-10** Basic information about the FAN-023A-B

Item	Details
Description	Fan box(B,FAN panel side exhaust)
Part Number	02312DKW
Model	FAN-023A-B

### Appearance

**Figure 7-7** Appearance of the FAN-023A-B



### Version Mapping

**Table 7-11** Mappings between FAN-023A-B and product models

Product	Product Model	First Supported Version
S5731-S	S5731-S24P4X (02353AHX)	V200R019C00
S5731-S	S5731-S24P4X (02353AHX-001)	V200R020C10
S5731-S	S5731-S24P4X (02353AHX-003)	V200R021C10SPC600

Product	Product Model	First Supported Version
S5731-S	S5731-S24T4X (02353AHU)	V200R019C00
S5731-S	S5731-S24T4X (02353AHU-001)	V200R020C10
S5731-S	S5731-S48P4X (02353AJH)	V200R019C00
S5731-S	S5731-S48P4X (02353AJH-001)	V200R020C10
S5731-S	S5731-S48P4X (02353AJH-003)	V200R021C10SPC600
S5731-S	S5731-S48T4X (02353AJB)	V200R019C00
S5731-S	S5731-S48T4X (02353AJB-003)	V200R020C10
S5731S-S	S5731S-S24P4X-A (02353AHY)	V200R019C00
S5731S-S	S5731S-S24P4X-A (02353AHY-001)	V200R020C10
S5731S-S	S5731S-S24P4X-A (02353AHY-003)	V200R021C10SPC600
S5731S-S	S5731S-S24T4X-A (02353AHV)	V200R019C00
S5731S-S	S5731S-S24T4X-A (02353AHV-001)	V200R020C10
S5731S-S	S5731S-S48P4X-A (02353AJJ)	V200R019C00
S5731S-S	S5731S-S48P4X-A (02353AJJ-001)	V200R020C10
S5731S-S	S5731S-S48P4X-A (02353AJJ-003)	V200R021C10SPC600
S5731S-S	S5731S-S48T4X-A (02353AJC)	V200R019C00
S5731S-S	S5731S-S48T4X-A (02353AJC-003)	V200R020C10
S5731-H	S5731-H24HB4XZ (02354QXD)	V200R021C10SPC500
S5731-H	S5731-H24HB4XZ (02354QXD-001)	V200R021C10SPC600

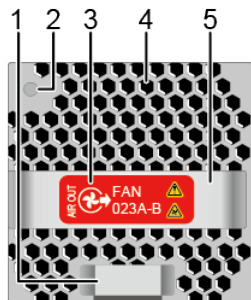
Product	Product Model	First Supported Version
S5731-H	S5731-H24P4XC (02352QPV)	V200R013C02
S5731-H	S5731-H24P4XC (02352QPV-001)	V200R020C10
S5731-H	S5731-H24P4XC (02352QPV-003)	V200R021C10SPC600
S5731-H	S5731-H24T4XC (02352QPP)	V200R013C02
S5731-H	S5731-H24T4XC (02352QPP-001)	V200R020C10
S5731-H	S5731-H24T4XC (02352QPP-005)	V200R021C10SPC600
S5731-H	S5731-H48HB4XZ (02354QXB)	V200R021C10SPC500
S5731-H	S5731-H48HB4XZ (02354QXB-001)	V200R021C10SPC600
S5731-H	S5731-H48P4XC (02352SVD)	V200R013C02
S5731-H	S5731-H48P4XC (02352SVD-001)	V200R020C10
S5731-H	S5731-H48P4XC (02352SVD-003)	V200R021C10SPC600
S5731-H	S5731-H48T4XC (02352QPT)	V200R013C02
S5731-H	S5731-H48T4XC (02352QPT-003)	V200R020C10
S5731-H	S5731-H48T4XC (02352QPT-007)	V200R021C10SPC600
S5731S-H	S5731S-H24HB4XZ-A (02354QXE)	V200R021C10SPC500
S5731S-H	S5731S-H24HB4XZ-A (02354QXE-001)	V200R021C10SPC600
S5731S-H	S5731S-H24T4S-A (02353DJE)	V200R019C00
S5731S-H	S5731S-H24T4S-A (02353DJE-001)	V200R020C10
S5731S-H	S5731S-H24T4S-A (02353DJE-003)	V200R021C10SPC600

Product	Product Model	First Supported Version
S5731S-H	S5731S-H24T4X-A (02353HVH)	V200R019C10
S5731S-H	S5731S-H24T4X-A (02353HVH-001)	V200R020C10
S5731S-H	S5731S-H24T4X-A (02353HVH-003)	V200R021C10SPC600
S5731S-H	S5731S-H24T4XC-A (02352YRG)	V200R019C00
S5731S-H	S5731S-H24T4XC-A (02352YRG-001)	V200R020C10
S5731S-H	S5731S-H24T4XC-A (02352YRG-003)	V200R021C10SPC600
S5731S-H	S5731S-H48HB4XZ-A (02354QXC)	V200R021C10SPC500
S5731S-H	S5731S-H48HB4XZ-A (02354QXC-001)	V200R021C10SPC600
S5731S-H	S5731S-H48T4S-A (02353DJG)	V200R019C00
S5731S-H	S5731S-H48T4S-A (02353DJG-003)	V200R020C10
S5731S-H	S5731S-H48T4S-A (02353DJG-005)	V200R021C10SPC600
S5731S-H	S5731S-H48T4X-A (02353HVJ)	V200R019C10
S5731S-H	S5731S-H48T4X-A (02353HVJ-003)	V200R020C10
S5731S-H	S5731S-H48T4X-A (02353HVJ-005)	V200R021C10SPC600
S5731S-H	S5731S-H48T4XC-A (02352YRF)	V200R019C00
S5731S-H	S5731S-H48T4XC-A (02352YRF-003)	V200R020C10
S5731S-H	S5731S-H48T4XC-A (02352YRF-005)	V200R021C10SPC600
S5735S-H	S5735S-H24S4XC-A (98011041)	V200R021C01
S5735S-H	S5735S-H24T4XC-A (98011025)	V200R020C00

Product	Product Model	First Supported Version
S5735S-H	S5735S-H24U4XC-A (98011033)	V200R020C00
S5735S-H	S5735S-H48T4XC-A (98011029)	V200R020C00
S5735S-H	S5735S-H48U4XC-A (98011037)	V200R020C00
S5736-S	S5736-S24S4XC (98011038)	V200R021C01
S5736-S	S5736-S24UM4XC (98011020)	V200R020C00
S5736-S	S5736-S24UM4XC (98011020-001)	V200R020C00
S5736-S	S5736-S24UM4XC (98011020-004)	V200R020C00
S5736-S	S5736-S48S4XC (98011042)	V200R021C01

## Panel

Figure 7-8 Panel of the FAN-023A-B



1. Lock	2. Indicator	3. Airflow flag (air out)	4. Fan air vent	5. Handle
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Table 7-12 Indicators on the FAN-023A-B

Silkscreen	Name	Color	Status	Description
-	Fan status indicator	-	Off	The fan module is not running.



Silkscreen	Name	Color	Status	Description
		Green	Steady on	The fan module is starting.
		Green	Slow blinking	The fan module is working properly.
		Red	Steady on	The fan module has a hardware fault and must be replaced. Common causes include short circuits, fan blades blocked, and faults of the fan module.

## Functions and Features

**Table 7-13** Functions and features of the FAN-023A-B

Functions and Features	Description
Basic function	The fan module has only one fan to cool the chassis.
Hot swapping	Supported

## Technical Specifications

**Table 7-14** Technical specifications of the FAN-023A-B

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 40 mm x 100.3 mm (1.57 in. x 1.57 in. x 3.95 in.)
Weight without packaging [kg(lb)]	0.1 kg (0.22 lb)
Number of fans	1

Item	Specification
Maximum power consumption [W]	7.2 W
Maximum heat dissipation [BTU/hour]	24.57 BTU/hour
Maximum fan speed [RPM]	18500 ± 10 %
Maximum airflow [CFM]	23 CFM
Airflow direction	Air exhausted from the panel side of the fan tray

## 7.5 FAN-031A-B (Fan box(B,FAN panel side exhaust))

### Overview

**Table 7-15** Basic information about the FAN-031A-B

Item	Details
Description	Fan box(B,FAN panel side exhaust)
Part Number	02352CAB
Model	FAN-031A-B

### Appearance

**Figure 7-9** Appearance of the FAN-031A-B



## Version Mapping

**Table 7-16** Mappings between FAN-031A-B and product models

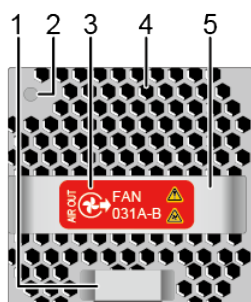
Product	Product Model	First Supported Version
S5732-H	S5732-H24S6Q (02353AJS)	V200R019C00
S5732-H	S5732-H24S6Q (02353AJS-001)	V200R020C10
S5732-H	S5732-H24S6Q (02353AJS-003)	V200R021C10SPC500
S5732-H	S5732-H24S6Q (02353AJS-004)	V200R021C10SPC600
S5732-H	S5732-H24S6Q (02353AJS-005)	V200R021C10SPC600
S5732-H	S5732-H24UM2CC (02353HUC)	V200R019C10
S5732-H	S5732-H24UM2CC (02353HUC-003)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY)	V200R019C10
S5732-H	S5732-H24UM2CC (02353SJY-001)	V200R019C10
S5732-H	S5732-H24UM2CC (02353SJY-004)	V200R019C10
S5732-H	S5732-H24UM2CC (02353SJY-010)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY-011)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY-014)	V200R021C10SPC500
S5732-H	S5732-H24UM2CC (02353SJY-020)	V200R022C00
S5732-H	S5732-H24UM2CC (02353SJY-021)	V200R022C00
S5732-H	S5732-H24UM2CC (02353SJY-024)	V200R022C00
S5732-H	S5732-H48S6Q (02353AJU)	V200R019C00

Product	Product Model	First Supported Version
S5732-H	S5732-H48S6Q (02353AJU-001)	V200R020C10
S5732-H	S5732-H48S6Q (02353AJU-003)	V200R021C10SPC500
S5732-H	S5732-H48S6Q (02353AJU-004)	V200R021C10SPC600
S5732-H	S5732-H48UM2CC (02353HUB)	V200R019C10
S5732-H	S5732-H48UM2CC (02353HUB-002)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT)	V200R019C10
S5732-H	S5732-H48UM2CC (02353SJT-001)	V200R019C10
S5732-H	S5732-H48UM2CC (02353SJT-003)	V200R019C10
S5732-H	S5732-H48UM2CC (02353SJT-004)	V200R019C10
S5732-H	S5732-H48UM2CC (02353SJT-010)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-011)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-013)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-014)	V200R021C10SPC500
S5732-H	S5732-H48UM2CC (02353SJT-020)	V200R022C00
S5732-H	S5732-H48UM2CC (02353SJT-021)	V200R022C00
S5732-H	S5732-H48UM2CC (02353SJT-023)	V200R022C00
S5732-H	S5732-H48UM2CC (02353SJT-024)	V200R022C00
S5732-H	S5732-H48XUM2CC (02353MLH)	V200R019C20
S5732-H	S5732-H48XUM2CC (02353MLH-001)	V200R021C10SPC500

Product	Product Model	First Supported Version
S5732-H	S5732-H48XUM2CC (02353MLH-002)	V200R023C10

## Panel

**Figure 7-10** Panel of the FAN-031A-B



1. Lock	2. Indicator	3. Airflow flag (air out)	4. Fan air vent	5. Handle
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**Table 7-17** Indicators on the FAN-031A-B

Silkscreen	Name	Color	Status	Description
-	Fan status indicator	-	Off	The fan module is not running.
		Green	Steady on	The fan module is starting.
		Green	Slow blinking	The fan module is working properly.

Silkscreen	Name	Color	Status	Description
		Red	Steady on	The fan module has a hardware fault and must be replaced. Common causes include short circuits, fan blades blocked, and faults of the fan module.

## Functions and Features

**Table 7-18** Functions and features of the FAN-031A-B

Functions and Features	Description
Basic function	The fan module has only one fan to cool the chassis.
Hot swapping	Supported

## Technical Specifications

**Table 7-19** Technical specifications of the FAN-031A-B

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 40 mm x 100.3 mm (1.57 in. x 1.57 in. x 3.95 in.)
Weight without packaging [kg(lb)]	0.1 kg (0.22 lb)
Number of fans	1
Maximum power consumption [W]	21.6 W
Maximum heat dissipation [BTU/hour]	73.7 BTU/hour
Maximum fan speed [RPM]	24500 ± 10 %
Maximum airflow [CFM]	31 CFM
Airflow direction	Air exhausted from the panel side of the fan tray

## 7.6 FAN-031A-F (Fan box (F, FAN panel side intake))

### Overview

**Table 7-20** Basic information about the FAN-031A-F

Item	Details
Description	Fan box (F, FAN panel side intake)
Part Number	02352CAA
Model	FAN-031A-F

### Appearance

**Figure 7-11** Appearance of the FAN-031A-F



### Version Mapping

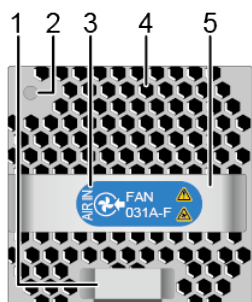
**Table 7-21** Mappings between FAN-031A-F and product models

Product	Product Model	First Supported Version
S5731-H	S5731-H48T4XC-B (02353VAD)	V200R020C00
S5731-H	S5731-H48T4XC-B (02353VAD-003)	V200R020C10

Product	Product Model	First Supported Version
S5731-H	S5731-H48T4XC-B (02353VAD-005)	V200R021C10SPC600

## Panel

Figure 7-12 Panel of the FAN-031A-F



1. Lock	2. Indicator	3. Airflow flag (air in)	4. Fan air vent	5. Handle
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Table 7-22 Indicators on the FAN-031A-F

Silkscreen	Name	Color	Status	Description
-	Fan status indicator	-	Off	The fan module is not running.
		Green	Steady on	The fan module is starting.
		Green	Slow blinking	The fan module is working properly.



Silkscreen	Name	Color	Status	Description
		Red	Steady on	The fan module has a hardware fault and must be replaced. Common causes include short circuits, fan blades blocked, and faults of the fan module.

## Functions and Features

**Table 7-23** Functions and features of the FAN-031A-F

Functions and Features	Description
Basic function	The fan module has only one fan to cool the chassis.
Hot swapping	Supported

## Technical Specifications

**Table 7-24** Technical specifications of the FAN-031A-F

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 40 mm x 100.3 mm (1.57 in. x 1.57 in. x 3.95 in.)
Weight without packaging [kg(lb)]	0.1 kg (0.22 lb)
Number of fans	1
Maximum power consumption [W]	21.6 W
Maximum heat dissipation [BTU/hour]	73.7 BTU/hour
Maximum fan speed [RPM]	24500 ± 10 %
Maximum airflow [CFM]	31 CFM
Airflow direction	Air exhausted from the panel side of the fan tray

## 7.7 FAN-060B-B (Fan box (B, FAN panel side exhaust))

### Overview

**Table 7-25** Basic information about the FAN-060B-B

Item	Details
Description	Fan box (B, FAN panel side exhaust)
Part Number	02350DNQ
Model	FAN-060B-B

### Appearance

**Figure 7-13** Appearance of the FAN-060B-B



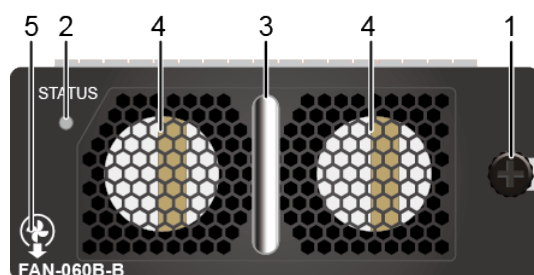
### Version Mapping

**Table 7-26** Mappings between FAN-060B-B and product models

Product	Product Model	First Supported Version
S5730-HI	S5730-60C-HI-48S (02351XFS)	V200R013C00

## Panel

**Figure 7-14** Panel of the FAN-060B-B



1. Captive screw	2. Indicator	3. Handle	4. Two fans	5. Airflow flag (air out)
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**Table 7-27** Indicators on the FAN-060B-B

Silkscreen	Name	Color	Status	Description
STATUS	Fan status indicator	-	Off	The fan module is not running.
		Green	Slow blinking	The fan module is working properly.
		Red	Steady on	The fan module has a hardware fault and must be replaced.

## Functions and Features

**Table 7-28** Functions and features of the FAN-060B-B

Functions and Features	Description
Basic function	The fan module has two fans to cool the chassis.
Hot swapping	Supported

## Technical Specifications

**Table 7-29** Technical specifications of the FAN-060B-B

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 100 mm x 220 mm (1.57 in. x 3.94 in. x 8.66 in.)
Weight without packaging [kg(lb)]	0.4 kg (0.88 lb)
Number of fans	2
Maximum power consumption [W]	32.6 W
Maximum heat dissipation [BTU/hour]	111.23 BTU/hour
Maximum fan speed [RPM]	19000 ± 10 %
Maximum airflow [CFM]	64 CFM
Airflow direction	Air exhausted from the panel side of the fan tray

# 8 Cards

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## 8.1 Card Classification

## 8.2 Card Structure and Dimensions

8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card)

8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)

8.5 ES5D000G4S01 (4-Port GE SFP Front Optical Interface Card)

8.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card)

8.7 ES5D00X2SA00 (2-Port GE SFP/10GE SFP+ Front Optical Interface Card)

8.8 ES5D00X4SA00 (4-Port GE SFP/10GE SFP+ Front Optical Interface Card)

8.9 ES5D00G4SC00 (4-Port GE SFP Front Optical Interface Card)

8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card)

8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card)

8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)

8.13 ES5D21G16S00 (16-Port GE SFP Front Optical Interface Card)

8.14 ES5D21G16T00 (16-Port GE Front Electrical Interface Card)

8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card)

8.16 ES5D21L04Q00 (4-Port 40GE QSFP+ Optical Interface Card)

8.17 ES5D21Q04Q01 (4-Port 40 Gig QSFP+ Rear Interface Card)

8.18 ES5D21X04S00 (4-Port 10GE SFP+ Rear Optical Interface Card)

8.19 ES5D21X04S01 (4-Port 10 GE SFP+ Rear Interface Card)

8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series)

8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series)

8.22 ES5D21X08S00 (8-Port 10GE SFP+ Rear Optical Interface Card)

[8.23 ES5D21X08T00 \(8-Port 10GBASE-T RJ45 Rear Interface Card\)](#)

[8.24 S7X08000 \(02312URW/02312URW-002: 8-Port 10GE SFP+ or 2-Port 25GE SFP28 Optical Interface Card \(Only Ports 1 and 2 Support 25GE\)\)](#)

[8.25 S7Y08000 \(02312URV/02312URV-002: 8-Port 25GE SFP28 Optical Interface Card\)](#)

[8.26 S7Q02001 \(02313UBW: 2-port 40GE QSFP+ interface card\)](#)

[8.27 S7Q02001 \(02313UBW-002: 2-port 40GE QSFP+ interface card\)](#)

[8.28 S7C02000 \(2-port 100GE QSFP28 interface card\)](#)

[8.29 ES5D21VST000 \(Dedicated Stack Card with 2\\*QSFP+ Interface\)](#)

[8.30 ES5D00ETPC00 \(Stack Rear Card\)](#)

[8.31 ES5D00ETPB00 \(Extended Rear Card\)](#)

## 8.1 Card Classification

**Table 8-1** lists the cards supported by the S5700.

**Table 8-1** Cards supported by the S5700

Card Type	Card Name	Card Description	Hot swapping
Front card	ES5D000X2S00	2-port 10GE SFP+ optical interface card	Not supported
Front card	ES5D000X4S01	4-port 10GE SFP+ optical interface card	Not supported
Front card	ES5D000G4S01	4-port GE optical interface card	Not supported
Front card	ES5D00G4SA01	4-port GE optical interface card	Not supported
Front card	ES5D00X2SA00	2-port GE SFP or 10GE SFP+ optical interface card	Supported
Front card	ES5D00X4SA00	4-port GE SFP or 10GE SFP+ optical interface card	Supported
Front card	ES5D00G4SC00	4-port GE SFP optical interface card	Supported
Front card	ES5D21G16S00	16-port GE SFP optical interface card	Supported
Front card	ES5D21G16T00	16-port GE RJ45 interface card	Supported

Card Type	Card Name	Card Description	Hot swapping
Rear card	ES5D21G08S00	8-port GE SFP optical interface card	Supported
Rear card	ES5D21G08T00	8-port GE RJ45 interface card	Supported
Rear card	ES5D21X02S00	2-port GE SFP or 10GE SFP+ optical interface card	Supported
Rear card	ES5D00ETPC00	Stack card	Not supported
Rear card	ES5D00ETPB00	Extended channel card	Not supported
Rear card	ES5D21L04Q00	4-port 40GE QSFP+ optical interface card	Supported
Rear card	ES5D21Q02Q00	2-port 40GE QSFP+ optical interface card	Supported
Rear card	ES5D21Q04Q01	4-port 40GE QSFP+ optical interface card	Supported
Rear card	ES5D21X04S00	4-port 10GE SFP+ optical interface card	Supported
Rear card	ES5D21X04S01	4-port 10GE SFP+ optical interface card	Supported
Rear card	ES5D21X02S01	2-port 10GE SFP+ optical interface card	Supported
Rear card	ES5D21X02T01	2-port 10GBASE-T RJ45 interface card	Supported
Rear card	ES5D21X08T00	8-port 10GBASE-T RJ45 interface card	Supported
Rear card	ES5D21X08S00	8-port 10GE SFP+ optical interface card	Supported
Rear card	ES5D21VST000	Dedicated stack card with 2*QSFP+ interface	Supported
Rear card	S7X08000	8-port 10GE SFP+ or 2-port 25GE SFP28 optical interface card (only ports 1 and 2 support 25GE)	Supported
Rear card	S7Y08000	8-port 25GE SFP28 optical interface card	Supported
Rear card	S7Q02001	2-port 40GE QSFP+ optical interface card	Supported

Card Type	Card Name	Card Description	Hot swapping
Rear card	S7C02000	2-port 100GE QSFP28 optical interface card	Supported

**NOTE**

Some cards are sold with other cards, for example, front card ES5D000X4S01 is sold with rear card ES5D00ETPB00. When a card is faulty, provide the bar code of the card for technical support personnel to fix the problem.

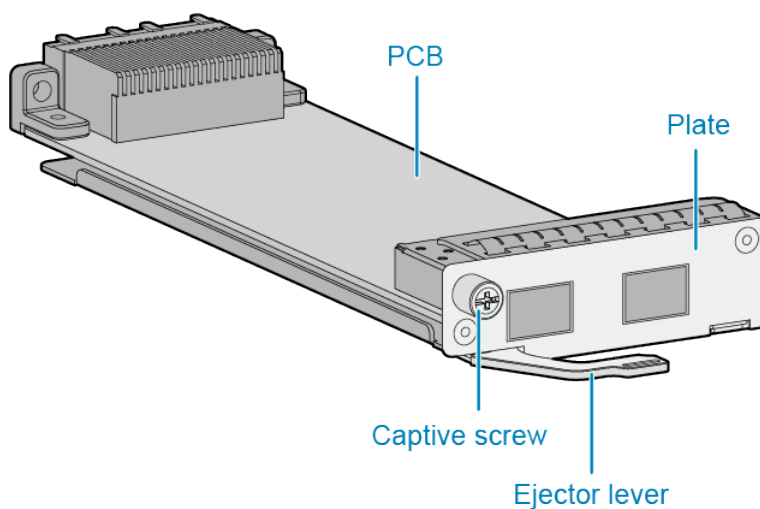
The cards supported by a switch depend on the software version. For details, see [Info-finder](#).

## 8.2 Card Structure and Dimensions

### Card Structure

[Figure 8-1](#) shows the card appearance.

**Figure 8-1** Card appearance



A card consists of the following components:

- Printed circuit board (PCB)

The PCB contains all the functional chips of the card and is the core of the card. The PCB provides indicators and ports on the front panel.

**NOTE**

Different cards provide different indicators and ports. For details, see the description of specific cards.

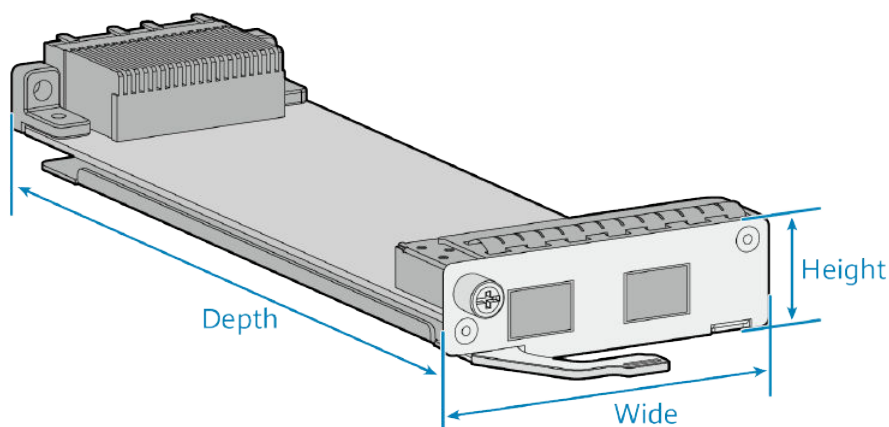


- Front panel, consisting of the captive screws, ejector levers, and plate
  - Captive screw: fixes the card into the chassis.
  - Ejector lever: allows you to insert and remove the card.
  - Plate: joins the ejector levers and the PCB.

## Card Dimensions

Figure 8-2 shows the width, height, and depth of a card.

Figure 8-2 Card dimensions



### NOTE

The card dimensions are defined as follows:

- Width: the longest distance between the tops of two ejector levers
- Depth: the distance between the plate and the end of PCB
- Height: the height of the front panel

## 8.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card)

### Version Mapping

Table 8-2 lists the mapping between the ES5D000X2S00 card and software versions.

**Table 8-2** Version mapping

Card Model	Software Version
ES5D000X2S00 <b>NOTE</b> After the <b>display device</b> command is executed, the PCB model of the card is displayed as ES510X2S.	V100R005C01 to V200R005C03 <b>NOTE</b> This module is not supported in V200R003C02 or V200R003C10.

## Card Overview

The ES5D000X2S00 provides two 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in a front card slot of the switch models listed in [Table 8-3](#).

**Table 8-3** Applicable switch models

Card	Switch Model
ES5D000X2S00	<ul style="list-style-type: none"> <li>● S5700-28C-SI</li> <li>● S5700-52C-SI</li> <li>● S5700-28C-PWR-SI</li> <li>● S5700-52C-PWR-SI</li> <li>● S5700-28C-EI</li> <li>● S5700-52C-EI</li> <li>● S5700-28C-EI-24S</li> <li>● S5700-28C-PWR-EI</li> <li>● S5700-52C-PWR-EI</li> <li>● S5710-28C-LI</li> <li>● S5710-52C-LI</li> <li>● S5710-28C-PWR-LI</li> <li>● S5710-52C-PWR-LI</li> </ul>

[Figure 8-3](#) shows the appearance of the ES5D000X2S00.

**Figure 8-3** ES5D000X2S00

## Functions

**Table 8-4** describes functions of the ES5D000X2S00.

**Table 8-4** Functions

Function	Description
Basic function	Provides two 10GE SFP+ optical ports for data access and line-rate switching.
10GE port	A 10GE port is often used as an uplink aggregation port on high-bandwidth and high-speed MANs or backbone networks. When an enterprise needs high-quality triple-play service, use the ES5D000X2S00 to provide access ports for downlink devices or networks. Different transmission distances can be supported by using SFP+ optical modules.

## Usage Constraints

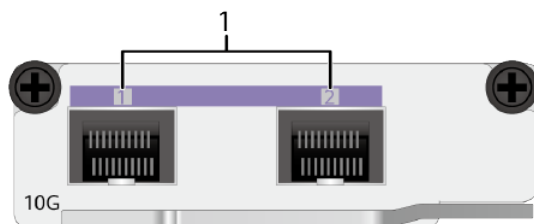
**NOTICE**

The ES5D000X2S00 is not hot swappable.

## Indicators and Ports

**Figure 8-4** shows indicators on the ES5D000X2S00.

**Figure 8-4** Indicators on the ES5D000X2S00



**Table 8-5** shows indicators on the ES5D000X2S00.

**Table 8-5** Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> <li>Steady on: A link is established on the port.</li> <li>Blinking: The port is sending or receiving data.</li> </ul>
		Off	No link is established on the port.

shows the ports on the ES5D000X2S00.

**Figure 8-5** Ports on the ES5D000X2S00



1. Two 10GE SFP+ ports

### 10GE SFP+ port

The ES5D000X2S00 provides two 10GE optical ports to transmit and receive Ethernet service data at 1 Gbit/s or 10 Gbit/s. **Table 8-6** describes attributes of a 10GE SFP+ optical port.

 **NOTE**

When used on the S5710-C-LI, the 10GE SFP+ ports support the 10GE SFP+ and GE SFP optical modules. When used on the S5700-SI, the 10GE SFP+ ports support 10GE SFP+ optical modules, GE optical modules, and GE copper modules (applicable in V200R002C00 and later versions and used with shielded Ethernet cables), SFP+ copper cables (applicable in V200R002C00 and later versions), and AOC cables (applicable in V200R003C00 and later versions). When used on the S5700-EI, the 10GE SFP+ ports support 10GE SFP+ optical modules, SFP+ copper cables (applicable in V200R002C00 and later versions), and AOC cables (applicable in V200R003C00 and later versions).

**Table 8-6** Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see <a href="#">10.5 GE eSFP Optical Modules</a> , <a href="#">10.7 GE-CWDM eSFP Optical Modules</a> , <a href="#">10.9 GE-DWDM eSFP Optical Modules</a> , <a href="#">10.10 GE SFP Copper Modules</a> , <a href="#">10.13 10GE SFP+ Optical Modules</a> , and <a href="#">10.14 10GE-CWDM SFP+ Optical Modules</a> )
Standards compliance	IEEE 802.3ae

## Technical Specifications

[Table 8-7](#) describes the technical specifications of the ES5D000X2S00.

**Table 8-7** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>Dimensions (H x W x D): 22 mm x 70 mm x 197 mm (0.87 in. x 2.8 in. x 7.8 in.)</li> <li>Weight: 0.2 kg (0.44 lb)</li> <li>Maximum power consumption: 6.5 W</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 8-8](#) provides the ES5D000X2S00 ordering information.

**Table 8-8** Ordering information

Card Description	Card Name	Part Number
2-port 10GE SFP+ optical interface card (front card)	ES5D000X2S00	03020XEV

## 8.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)

### Version Mapping

**Table 8-9** lists the mapping between the ES5D000X4S01 card and software versions.

**Table 8-9** Version mapping

Card Model	Software Version
ES5D000X4S01 <b>NOTE</b> After the <b>display device</b> command is executed, the PCB model of the card is displayed as ES510X4S.	V100R005C01 to V200R005C03 <b>NOTE</b> This module is not supported in V200R003C02 or V200R003C10.

### Card Overview

The ES5D000X4S01 provides four 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in a front card slot of the switch models listed in **Table 8-10**.

**Table 8-10** Applicable switch models

Card	Switch Model
ES5D000X4S01	<ul style="list-style-type: none"><li>• S5700-28C-SI</li><li>• S5700-52C-SI</li><li>• S5700-28C-PWR-SI</li><li>• S5700-52C-PWR-SI</li><li>• S5700-28C-EI</li><li>• S5700-52C-EI</li><li>• S5700-28C-EI-24S</li><li>• S5700-28C-PWR-EI (PCB version: VB)</li><li>• S5700-52C-PWR-EI (PCB version: VB)</li><li>• S5710-28C-LI</li><li>• S5710-52C-LI</li><li>• S5710-28C-PWR-LI</li><li>• S5710-52C-PWR-LI</li></ul>

**Figure 8-6** shows the appearance of the ES5D000X4S01.

**Figure 8-6** ES5D000X4S01



## Functions

**Table 8-11** describes functions of the ES5D000X4S01.

**Table 8-11** Functions

Function	Description
Basic function	Provides two/four 10GE SFP+ optical ports for data access and line-rate switching.
10GE port	A 10GE port is often used as an uplink aggregation port on high-bandwidth and high-speed MANs or backbone networks. When an enterprise needs high-quality triple-play service, use the ES5D000X4S01 to provide access ports for downlink devices or networks. Different transmission distances can be supported by using SFP+ optical modules.

## Usage Constraints

### NOTICE

- The ES5D000X4S01 front card can provide four ports only if it is used with an ES5D00ETPB00 extended rear card. If no ES5D00ETPB00 extended rear card is used, only ports 1 and 3 on the ES5D000X4S01 front card are available. The names of ports 1 and 3 are respectively XGigabitEthernet \*/1/1 and XGigabitEthernet \*/1/2, where \* indicates the slot ID.
- The ES5D000X4S01 front card must be used with an ES5D00ETPB00 card whose PCB version is VC.
- The ES5D000X4S01 front card must be used with PCB of VB or later versions on S5700-EI switches (VC on S5700-52C-EI). Use the **display version** command to check the PCB version of a switch.
- The ES5D000X4S01 is not hot swappable.

## Indicators and Ports

**Figure 8-7** shows indicators on the ES5D000X4S01/

**Figure 8-7** Indicators on the ES5D000X4S01



**Table 8-12** describes indicators on the ES5D000X4S01.



**Table 8-12** Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> <li>Steady on: A link is established on the port.</li> <li>Blinking: The port is sending or receiving data.</li> </ul>
		Off	No link is established on the port.

**Figure 8-8** shows the ports on the ES5D000X4S01.

**Figure 8-8** Ports on the ES5D000X4S01



- |                                 |
|---------------------------------|
| 1. Four 10GE SFP+ optical ports |
|---------------------------------|

### 10GE SFP+ optical port

The ES5D000X4S01 provides four 10GE optical ports to transmit and receive Ethernet service data at 1 Gbit/s or 10 Gbit/s. **Table 8-13** describes attributes of a 10GE SFP+ optical port.

**NOTE**

When used on the S5710-C-LI, the 10GE SFP+ ports support the 10GE SFP+ and GE SFP optical modules. When used on the S5700-SI, the 10GE SFP+ ports support 10GE SFP+ optical modules, GE optical modules, and GE copper modules (applicable in V200R002C00 and later versions and used with shielded Ethernet cables), SFP+ copper cables (applicable in V200R002C00 and later versions), and AOC cables (applicable in V200R003C00 and later versions). When used on the S5700-EI, the 10GE SFP+ ports support 10GE SFP+ optical modules, SFP+ copper cables (applicable in V200R002C00 and later versions), and AOC cables (applicable in V200R003C00 and later versions).

**Table 8-13** Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module used (see <a href="#">10.5 GE eSFP Optical Modules</a> , <a href="#">10.7 GE-CWDM eSFP Optical Modules</a> , <a href="#">10.9 GE-DWDM eSFP Optical Modules</a> , <a href="#">10.10 GE SFP Copper Modules</a> , <a href="#">10.13 10GE SFP+ Optical Modules</a> , and <a href="#">10.14 10GE-CWDM SFP+ Optical Modules</a> )
Standards compliance	IEEE 802.3ae

## Technical Specifications

[Table 8-14](#) lists technical specifications of the ES5D000X4S01.

**Table 8-14** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>Dimensions (H x W x D): 22 mm x 70 mm x 197 mm (0.87 in. x 2.8 in. x 7.8 in.)</li> <li>Weight: 0.3 kg (0.66 lb)</li> <li>Maximum power consumption: 13 W</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 8-15](#) provides the ES5D000X4S01 ordering information.

**Table 8-15** Ordering information

Card Description	Card Name	Part Number
4-port 10GE SFP+ optical interface card (consisting of an ES5D000X4S01 4-port 10GE front card and an ES5D00ETPB00 extended channel rear card)	ES5D000X4S00 <b>NOTE</b> The ES5D000X4S01 front card must work with the ES5D00ETPB00 rear card, so the two cards are sold together. ES5D000X4S00 is the name of the combination of the two cards.	02319956

## 8.5 ES5D000G4S01 (4-Port GE SFP Front Optical Interface Card)

### Version Mapping

**Table 8-16** lists the mapping between the ES5D000G4S01 card and software versions.

**Table 8-16** Version mapping

Card Model	Software Version
ES5D000G4S01 <b>NOTE</b> After the <b>display device</b> command is executed, the PCB model of the card is displayed as ES510G4S.	V100R005C01 to V200R005C03 <b>NOTE</b> This module is not supported in V200R003C02 or V200R003C10.

### Card Overview

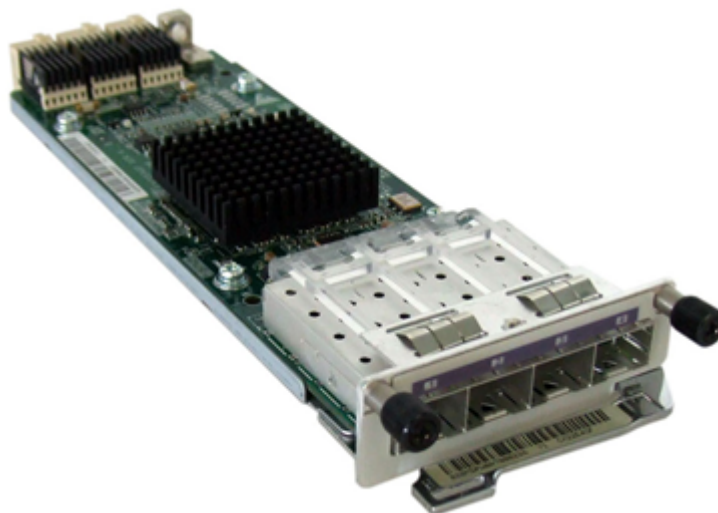
The ES5D000G4S01 provides four GE SFP optical ports for data access and line-rate switching. It can be installed in a front card slot of the switch models listed in **Table 8-17**.

**Table 8-17** Applicable switch models

Card	Switch Model
ES5D000G4S01	<ul style="list-style-type: none"> <li>• S5700-28C-EI</li> <li>• S5700-52C-EI</li> <li>• S5700-28C-EI-24S</li> <li>• S5700-28C-PWR-EI</li> <li>• S5700-52C-PWR-EI</li> </ul>

**Figure 8-9** shows the appearance of the ES5D000G4S01.

**Figure 8-9** ES5D000G4S01



## Functions

**Table 8-18** describes functions of the ES5D000G4S01.

**Table 8-18** Functions

Function	Description
Basic function	Provides four GE SFP optical ports for data access and line-rate switching.
GE port	A GE port is often used as an uplink aggregation port on high-bandwidth and high-speed MANs or backbone networks. When an enterprise needs high-quality triple-play service, use the ES5D000G4S01 to provide access ports for downlink devices or networks.

## Usage Constraints

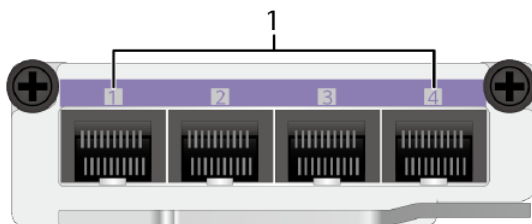
### NOTICE

- If the ES5D000G4S01 is installed on the S5700-SI or S5710-C-LI, the front card cannot register.
- The ES5D000G4S01 front card can provide four ports only if it is used with an ES5D00ETPB00 extended rear card. If no ES5D00ETPB00 extended rear card is used, only the first two ports on the ES5D000G4S01 front card are available.
- When an S5700-EI is equipped with the ES5D00ETPC00 stack rear card, only ports 1 and 2 are available if the ES5D000G4S01 front card is used.
- The ES5D000G4S01 is not hot swappable.

## Indicators and Ports

**Figure 8-10** shows indicators on the ES5D000G4S01.

**Figure 8-10** Indicators on the ES5D000G4S01



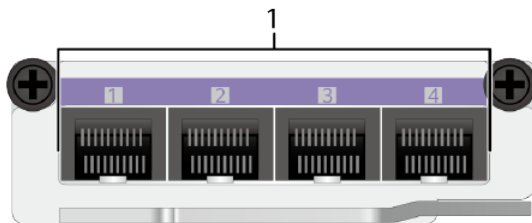
**Table 8-19** describes indicator status on the ES5D000G4S01.

**Table 8-19** Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> <li>• Steady on: A link is established on the port.</li> <li>• Blinking: The port is sending or receiving data.</li> </ul>
		Off	No link is established on the port.

**Figure 8-11** shows the ports on the ES5D000G4S01.

**Figure 8-11** Ports on the ES5D000G4S01



1. Four GE SFP optical ports

### GE SFP port

The ES5D000G4S01 provides four GE optical ports to transmit and receive Ethernet service data at 1000 Mbit/s. [Table 8-20](#) describes attributes of an SFP optical port.

#### NOTE

The GE SFP ports support GE optical and copper modules (used with shielded Ethernet cables).

A GE SFP port can go Up after a GE copper module is installed. However, electrical attributes, such as the rate, duplex mode, auto-negotiation, MDI, flow control, and virtual cable test, are not configurable in this case.

**Table 8-20** Attributes of an SFP optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see <a href="#">10.5 GE eSFP Optical Modules</a> , <a href="#">10.7 GE-CWDM eSFP Optical Modules</a> , <a href="#">10.9 GE-DWDM eSFP Optical Modules</a> , and <a href="#">10.10 GE SFP Copper Modules</a> )
Standards compliance	IEEE 802.3z

## Technical Specifications

[Table 8-21](#) lists technical specifications of the ES5D000G4S01.

**Table 8-21** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"><li>• Dimensions (H x W x D): 22 mm x 70 mm x 197 mm (0.87 in. x 2.8 in. x 7.8 in.)</li><li>• Weight: 0.2 kg (0.44 lb)</li><li>• Maximum power consumption: 6 W</li></ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the

latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 8-22](#) provides the ES5D000G4S01 ordering information.

**Table 8-22** Ordering information

Card Description	Card Name	Part Number
4-port GE SFP optical interface card (consisting of an ES5D000G4S01 4-port GE front card and an ES5D00ETPB00 extended channel rear card)  This card is applicable to the EI series.	ES5D000G4S00 <b>NOTE</b> The ES5D000G4S01 front card must work with the ES5D00ETPB00 rear card, so the two cards are sold together. ES5D000G4S00 is the name of the combination of the two cards.	02319957

## 8.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card)

### Version Mapping

[Table 8-23](#) lists the mapping between the ES5D00G4SA01 card and software versions.

**Table 8-23** Version mapping

Card Model	Software Version
ES5D00G4SA01 <b>NOTE</b> After the <b>display device</b> command is executed, the PCB model of the card is displayed as ES510G4SA.	V100R005C01 to V200R005C02 <b>NOTE</b> This module is not supported in V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

### Card Overview

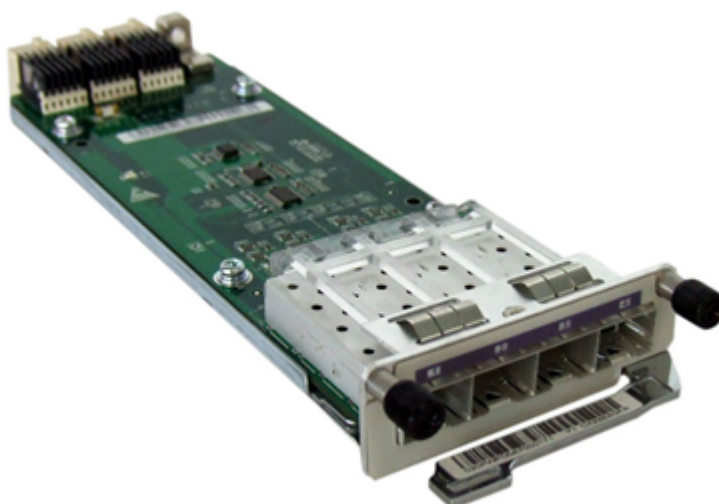
The ES5D00G4SA01 provides four GE SFP optical ports for data access and line-rate switching. It can be installed in a front card slot of the switch models listed in [Table 8-24](#).

**Table 8-24** Applicable switch models

Card	Switch Model
ES5D00G4SA01	<ul style="list-style-type: none"> <li>• S5700-28C-SI</li> <li>• S5700-52C-SI</li> <li>• S5700-28C-PWR-SI</li> <li>• S5700-52C-PWR-SI</li> <li>• S5710-28C-LI</li> <li>• S5710-52C-LI</li> <li>• S5710-28C-PWR-LI</li> <li>• S5710-52C-PWR-LI</li> </ul>

**Figure 8-12** shows the appearance of the ES5D00G4SA01.

**Figure 8-12** ES5D00G4SA01



## Functions

**Table 8-25** describes functions of the ES5D00G4SA01.

**Table 8-25** Functions

Function	Description
Basic function	Provides four GE SFP optical ports for data access and line-rate switching.



Function	Description
GE port	A GE port is often used as an uplink aggregation port on high-bandwidth and high-speed MANs or backbone networks. When an enterprise needs high-quality triple-play service, use the ES5D00G4SA01 to provide access ports for downlink devices or networks.

## Usage Constraints

### NOTICE

- If the ES5D00G4SA01 is installed on the S5700-EI, the front card cannot register.
- The ES5D00G4SA01 front card can provide four ports only if it is used with an ES5D00ETPB00 extended rear card. If no ES5D00ETPB00 extended rear card is used, only the first two ports on the ES5D00G4SA01 front card are available.
- When an S5700-SI/S5710-C-LI is equipped with the ES5D00ETPC00 stack rear card, only ports 1 and 2 are available if the ES5D00G4SA01 front card is used.
- The ES5D00G4SA01 is not hot swappable.

## Indicators and Ports

Figure 8-13 shows indicators on the ES5D00G4SA01.

Figure 8-13 Indicators on the ES5D00G4SA01



Table 8-26 describes indicator status on the ES5D00G4SA01.

**Table 8-26** Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> <li>Steady on: A link is established on the port.</li> <li>Blinking: The port is sending or receiving data.</li> </ul>
		Off	No link is established on the port.

**Figure 8-14** shows the ports on the ES5D00G4SA01.

**Figure 8-14** Ports on the ES5D00G4SA01



1. Four GE SFP optical ports

### GE SFP optical port

The ES5D00G4SA01 provides four GE optical ports to transmit and receive Ethernet service data at 1000 Mbit/s. **Table 8-27** describes attributes of an SFP optical port.

#### NOTE

The GE SFP ports support GE optical and copper modules (used with shielded Ethernet cables).

A GE SFP port can go Up after a GE copper module is installed. However, electrical attributes, such as the rate, duplex mode, auto-negotiation, MDI, flow control, and virtual cable test, are not configurable in this case.

**Table 8-27** Attributes of an SFP optical port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module used (see <a href="#">10.5 GE eSFP Optical Modules</a> , <a href="#">10.7 GE-CWDM eSFP Optical Modules</a> , <a href="#">10.9 GE-DWDM eSFP Optical Modules</a> , and <a href="#">10.10 GE SFP Copper Modules</a> )
Standards compliance	IEEE 802.3z

## Technical Specifications

[Table 8-28](#) lists technical specifications of the ES5D00G4SA01.

**Table 8-28** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>Dimensions (H x W x D): 22 mm x 70 mm x 197 mm (0.87 in. x 2.8 in. x 7.8 in.)</li> <li>Weight: 0.2 kg (0.44 lb)</li> <li>Maximum power consumption: 4.5 W</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 8-29](#) provides the ES5D00G4SA01 ordering information.

**Table 8-29** Ordering information

Card Description	Card Name	Part Number
4-port GE SFP optical interface card (consisting of an ES5D00G4SA01 4-port GE front card and an ES5D00ETPB00 extended channel rear card)  This card is applicable to the SI series.	ES5D00G4SA00  <b>NOTE</b> The ES5D00G4SA01 front card must work with the ES5D00ETPB00 rear card, so the two cards are sold together. ES5D00G4SA00 is the name of the combination of the two cards.	02319958

## 8.7 ES5D00X2SA00 (2-Port GE SFP/10GE SFP+ Front Optical Interface Card)

### Version Mapping

**Table 8-30** lists the mapping between the ES5D00X2SA00 card and software versions.

**Table 8-30** Version mapping

Card Model	Software Version
ES5D00X2SA00 <b>NOTE</b> After the <b>display device</b> command is executed, the PCB model of the card is displayed as ES510X2SA.	V100R006C01 to V200R005C02 <b>NOTE</b> This module is not supported in V200R003C02 or V200R003C10.

### Card Overview

The ES5D00X2SA00 provides two 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in a card slot of the switch models listed in **Table 8-31**.

**Table 8-31** Applicable switch models

Card	Switch Model
ES5D00X2SA00	<ul style="list-style-type: none"> <li>• S5700-28C-HI</li> <li>• S5700-28C-HI-24S</li> </ul>

**Figure 8-15** shows the appearance of the ES5D00X2SA00.

**Figure 8-15** ES5D00X2SA00



## Functions

**Table 8-32** describes functions of the ES5D00X2SA00.

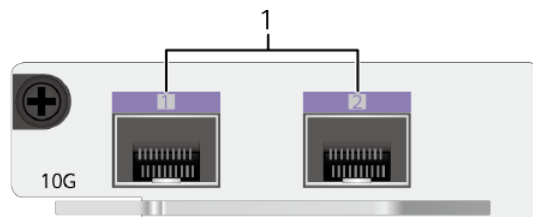
**Table 8-32** Functions

Function	Description
Basic function	Provides two 10GE SFP+ optical ports respectively for data access and line-rate switching.
Enhanced service	The S5700-HI powers on or off the ES5D00X2SA00, detects whether the ES5D00X2SA00 is installed or not, and manages PHY chips and optical ports on the ES5D00X2SA00. They provide hardware-based OAM and BFD for the switch.
Hot swapping	Supported
Service ports for stacking	The service ports on the ES5D00X2SA00 can be used as stack ports on an S5700-HI switch. <b>NOTE</b> The S5700-HI has supported service port-based stacking since V200R003C00.

## Indicators and Ports

**Figure 8-16** shows indicators on the ES5D00X2SA00.

**Figure 8-16** Indicators on the ES5D00X2SA00



**Table 8-33** shows indicators on the ES5D00X2SA00.

**Table 8-33** Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"><li>Steady on: A link is established on the port.</li><li>Blinking: The port is sending or receiving data.</li></ul>
		Off	No link is established on the port.

**Figure 8-17** shows ports on the ES5D00X2SA00.

**Figure 8-17** Ports on the ES5D00X2SA00

1. Two/Four 10GE SFP+ optical ports

### 10GE SFP+ optical port

The ES5D00X2SA00 provides two 10GE optical ports (GE/10GE auto-sensing) respectively to transmit and receive Ethernet service data at 1 Gbit/s or 10 Gbit/s. **Table 8-34** describes attributes of an SFP+ optical port.

#### NOTE

The 10GE SFP+ optical ports support 10GE SFP+ optical modules, GE optical modules, GE copper modules (in V200R002C00 and later versions, used with shielded twisted pair cables), SFP+ cables (in V200R002C00 and later versions), and AOC cables (in V200R003C00 and later versions).

**Table 8-34** Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module used (see <a href="#">10.5 GE eSFP Optical Modules</a> , <a href="#">10.7 GE-CWDM eSFP Optical Modules</a> , <a href="#">10.9 GE-DWDM eSFP Optical Modules</a> , <a href="#">10.10 GE SFP Copper Modules</a> , <a href="#">10.13 10GE SFP+ Optical Modules</a> , and <a href="#">10.14 10GE-CWDM SFP+ Optical Modules</a> )
Standards compliance	IEEE 802.3ae

## Technical Specifications

[Table 8-35](#) lists technical specifications of the ES5D00X2SA00.

**Table 8-35** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>Dimensions (H x W x D): 23 mm x 77 mm x 207 mm (0.9 in. x 3.0 in. x 8.1 in.)</li> <li>Weight: 0.5 kg (1.10 lb)</li> <li>Maximum power consumption: 7 W</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 8-36](#) provides the ES5D00X2SA00 ordering information.

**Table 8-36** Ordering information

Card Description	Card Name	Part Number
2-port GE SFP or 10GE SFP+ optical interface card (front card)	ES5D00X2SA00	03021JYN

## 8.8 ES5D00X4SA00 (4-Port GE SFP/10GE SFP+ Front Optical Interface Card)

## Version Mapping

**Table 8-37** lists the mapping between the ES5D00X4SA00 card and software versions.

**Table 8-37** Version mapping

Card Model	Software Version
ES5D00X4SA00 <b>NOTE</b> After the <b>display device</b> command is executed, the PCB model of the card is displayed as ES510X4SA.	V100R006C01 to V200R005C02 <b>NOTE</b> This module is not supported in V200R003C02 or V200R003C10.

## Card Overview

The ES5D00X4SA00 provides four 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in a card slot of the switch models listed in **Table 8-38**.

**Table 8-38** Applicable switch models

Card	Switch Model
ES5D00X4SA00	<ul style="list-style-type: none"> <li>• S5700-28C-HI</li> <li>• S5700-28C-HI-24S</li> </ul>

**Figure 8-18** shows the appearance of the ES5D00X4SA00.

**Figure 8-18** ES5D00X4SA00





## Functions

**Table 8-39** describes of the ES5D00X4SA00.

**Table 8-39** Functions

Function	Description
Basic function	Provides four 10GE SFP+ optical ports respectively for data access and line-rate switching.
Enhanced service	The S5700-HI powers on or off the ES5D00X4SA00, detects whether the ES5D00X4SA00 is installed or not, and manages PHY chips and optical ports on the ES5D00X4SA00. They provide hardware-based OAM and BFD for the switch.
Hot swapping	Supported
Service ports for stacking	The service ports on the ES5D00X4SA00 can be used as stack ports on an S5700-HI switch. <b>NOTE</b> The S5700-HI has supported service port-based stacking since V200R003C00.

## Indicators and Ports

**Figure 8-19** shows indicators on the ES5D00X4SA00.

**Figure 8-19** Indicators on the ES5D00X4SA00



**Table 8-40** shows indicators on the ES5D00X4SA00.

**Table 8-40** Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> <li>Steady on: A link is established on the port.</li> <li>Blinking: The port is sending or receiving data.</li> </ul>
		Off	No link is established on the port.

**Figure 8-20** shows ports on the ES5D00X4SA00.

**Figure 8-20** Ports on the ES5D00X4SA00



1. Four 10GE SFP+ optical ports

### 10GE SFP+ optical port

The ES5D00X4SA00 provides four 10GE optical ports (GE/10GE auto-sensing) respectively to transmit and receive Ethernet service data at 1 Gbit/s or 10 Gbit/s. **Table 8-41** describes attributes of an SFP+ optical port.

#### NOTE

The 10GE SFP+ optical ports support 10GE SFP+ optical modules, GE optical modules, GE copper modules (in V200R002C00 and later versions, used with shielded twisted pair cables), SFP+ cables (in V200R002C00 and later versions), and AOC cables (in V200R003C00 and later versions).

**Table 8-41** Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module used (see <a href="#">10.5 GE eSFP Optical Modules</a> , <a href="#">10.7 GE-CWDM eSFP Optical Modules</a> , <a href="#">10.9 GE-DWDM eSFP Optical Modules</a> , <a href="#">10.10 GE SFP Copper Modules</a> , <a href="#">10.13 10GE SFP+ Optical Modules</a> , and <a href="#">10.14 10GE-CWDM SFP+ Optical Modules</a> )
Standards compliance	IEEE 802.3ae

## Technical Specifications

[Table 8-42](#) lists technical specifications of the ES5D00X4SA00.

**Table 8-42** Specifications of the ES5D00X4SA00

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>Dimensions (H x W x D): 23 mm x 77 mm x 207 mm (0.9 in. x 3.0 in. x 8.1 in.)</li> <li>Weight: 0.5 kg (1.10 lb)</li> <li>Maximum power consumption: 10 W</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 8-43](#) provides the ES5D00X4SA00 ordering information.

**Table 8-43** Ordering information

Card Description	Card Name	Part Number
4-port GE SFP or 10GE SFP+ optical interface card (front card)	ES5D00X4SA00	03021JYM

## 8.9 ES5D00G4SC00 (4-Port GE SFP Front Optical Interface Card)

## Version Mapping

**Table 8-44** lists the mapping between the ES5D00G4SC00 card and software versions.

**Table 8-44** Version mapping

Card Model	Software Version
ES5D00G4SC00 <b>NOTE</b> After the <b>display device</b> command is executed, the PCB model of the card is displayed as ES510G4SC.	V100R006C01 to V200R005C02 <b>NOTE</b> This module is not supported in V200R003C02 or V200R003C10.

## Card Overview

The ES5D00G4SC00 provides four 1000M SFP optical ports for data access and line-rate switching for upstream services. It can be installed in a front card slot of the switch models listed in **Table 8-45**.

**Table 8-45** Applicable switch models

Card	Switch Model
ES5D00G4SC00	<ul style="list-style-type: none"> <li>• S5700-28C-HI</li> <li>• S5700-28C-HI-24S</li> </ul>

**Figure 8-21** shows the appearance of the ES5D00G4SC00.

**Figure 8-21** ES5D00G4SC00



## Functions

**Table 8-46** describes functions of the ES5D00G4SC00.

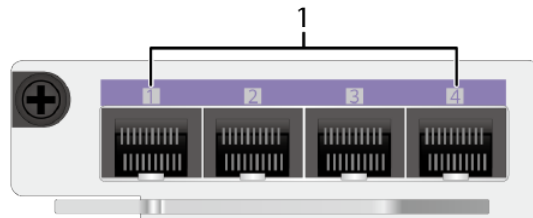
**Table 8-46** Functions

Function	Description
Basic function	Provides four 1000M SFP optical ports for data access and line-rate switching for upstream services.
Enhanced service	The S5700-HI powers on or off the ES5D00G4SC00, detects whether the ES5D00G4SC00 is installed or not, and manages PHY chips and optical ports on the ES5D00G4SC00. The ES5D00G4SC00 provides hardware-based OAM and BFD for the switch.
Hot swapping	Supported

## Indicators and Ports

**Figure 8-22** shows indicators on the ES5D00G4SC00.

**Figure 8-22** Indicators on the ES5D00G4SC00



**Table 8-47** describes indicator status on the ES5D00G4SC00.

**Table 8-47** Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> <li>Steady on: A link is established on the port.</li> <li>Blinking: The port is sending or receiving data.</li> </ul>
		Off	No link is established on the port.

**Figure 8-23** shows ports on the ES5D00G4SC00.

**Figure 8-23** Ports on the ES5D00G4SC00



1. Four GE SFP optical ports

### GE SFP optical port

The ES5D00G4SC00 provides four GE optical ports to transmit and receive Ethernet service data at 1000 Mbit/s. **Table 8-48** describes attributes of an SFP optical port.

#### NOTE

The GE SFP ports support GE optical and copper modules (used with shielded Ethernet cables).

A GE SFP port can go Up after a GE copper module is installed. However, electrical attributes, such as the rate, duplex mode, auto-negotiation, MDI, flow control, and virtual cable test, are not configurable in this case.

**Table 8-48** Attributes of an SFP optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see <a href="#">10.5 GE eSFP Optical Modules</a> , <a href="#">10.7 GE-CWDM eSFP Optical Modules</a> , <a href="#">10.9 GE-DWDM eSFP Optical Modules</a> , <a href="#">10.10 GE SFP Copper Modules</a> )
Standards compliance	IEEE 802.3z

## Technical Specifications

**Table 8-49** lists technical specifications of the ES5D00G4SC00.

**Table 8-49** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>• Dimensions (H x W x D): 23 mm x 77 mm x 207 mm (0.9 in. x 3.0 in. x 8.1 in.)</li> <li>• Weight: 0.3 kg (0.66 lb)</li> <li>• Maximum power consumption: 4 W</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

**Table 8-50** provides the ES5D00G4SC00 ordering information.

**Table 8-50** Ordering information

Card Description	Card Name	Part Number
4-port GE SFP optical interface card (front card)	ES5D00G4SC00	03021JYP

## 8.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card)

### Version Mapping

**Table 8-51** lists the mapping between the ES5D21G08S00 card and software versions.

**Table 8-51** Version mapping

Card Model	Software Version
ES5D21G08S00	V200R001C00 to V200R005C02  <b>NOTE</b> This module is not supported in V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

### Card Overview

The ES5D21G08S00 provides eight GE SFP optical ports for data access and line-rate switching.

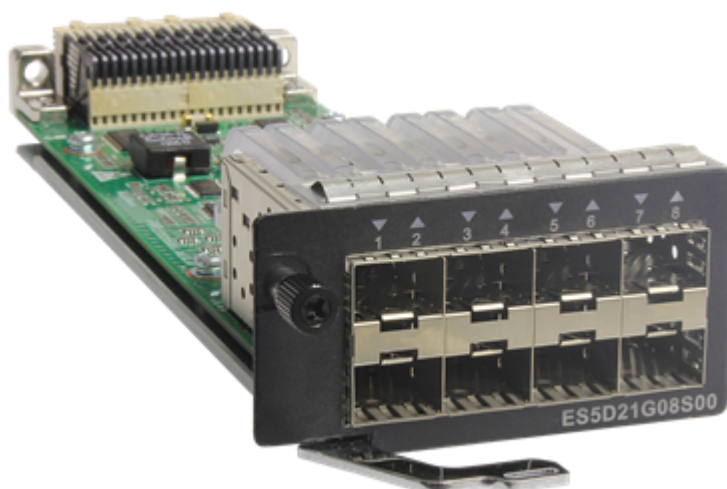
The ES5D21G08S00 can be installed in a rear card slot of the switch models listed in [Table 8-52](#).

**Table 8-52** Applicable switch models

Card	Switch Model
ES5D21G08S00	<ul style="list-style-type: none"> <li>• S5710-52C-PWR-EI</li> <li>• S5710-52C-PWR-EI-AC</li> <li>• S5710-28C-PWR-EI-AC</li> <li>• S5710-52C-EI</li> <li>• S5710-28C-EI</li> </ul>

[Figure 8-24](#) shows the appearance of the ES5D21G08S00.

**Figure 8-24** ES5D21G08S00



## Functions

[Table 8-53](#) describes functions of the ES5D21G08S00.

**Table 8-53** Functions

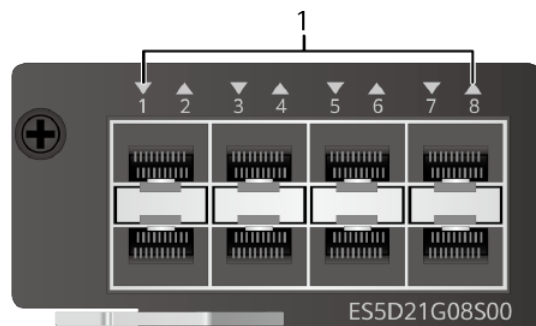
Function	Description
Basic function	Provides eight 1000M SFP optical ports for data access and line-rate switching for GE services.
Hot swapping	Supported



## Indicators and Ports

**Figure 8-25** shows indicators on the ES5D21G08S00.

**Figure 8-25** Indicators on the ES5D21G08S00



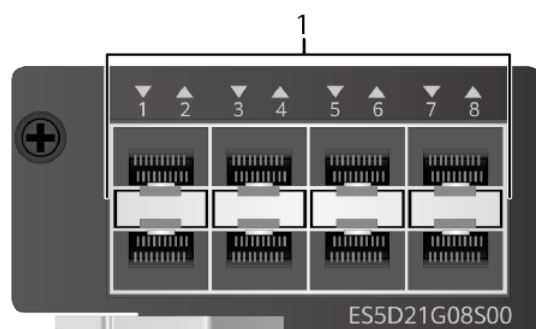
**Table 8-54** describes indicator status on the ES5D21G08S00.

**Table 8-54** Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> <li>Steady on: A link is established on the port.</li> <li>Blinking: The port is sending or receiving data.</li> </ul>
		Off	No link is established on the port.

**Figure 8-26** shows ports on the ES5D21G08S00.

**Figure 8-26** Ports on the ES5D21G08S00



1. Eight GE SFP optical ports

### GE SFP optical port

The ES5D21G08S00 provides eight GE optical ports to transmit and receive services at 1000 Mbit/s. [Table 8-55](#) describes attributes of an SFP optical port.

#### NOTE

The optical ports on the ES5D21G08S00 support GE optical modules.

**Table 8-55** Attributes of an SFP optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see <a href="#">10.5 GE eSFP Optical Modules</a> , <a href="#">10.7 GE-CWDM eSFP Optical Modules</a> , and <a href="#">10.9 GE-DWDM eSFP Optical Modules</a> )
Standards compliance	IEEE 802.3z

## Technical Specifications

[Table 8-56](#) lists technical specifications of the ES5D21G08S00.

**Table 8-56** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>Dimensions (H x W x D): 42 mm x 77 mm x 207 mm (1.7 in. x 3.0 in. x 8.1 in.)</li> <li>Weight: 0.3 kg (0.66 lb)</li> <li>Maximum power consumption: 12.4 W</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 8-57](#) provides the ES5D21G08S00 ordering information.

**Table 8-57** Ordering information

Card Description	Card Name	Part Number
8-port GE SFP optical interface card (rear card)	ES5D21G08S00	03021ESM

## 8.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card)

### Version Mapping

**Table 8-58** lists the mapping between the ES5D21G08T00 card and software versions.

**Table 8-58** Version mapping

Card Model	Software Version
ES5D21G08T00	V200R001C00 to V200R005C02 <b>NOTE</b> This module is not supported in V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

### Card Overview

The ES5D21G08T00 provides eight 10M/100M/1000M electrical ports for data access and line-rate switching.

The ES5D21G08T00 can be installed in a rear card slot of the switch models listed in **Table 8-59**.

**Table 8-59** Applicable switch models

Card	Switch Model
ES5D21G08T00	<ul style="list-style-type: none"> <li>● S5710-52C-PWR-EI</li> <li>● S5710-52C-PWR-EI-AC</li> <li>● S5710-28C-PWR-EI-AC</li> <li>● S5710-52C-EI</li> <li>● S5710-28C-EI</li> </ul>

**Figure 8-27** shows the appearance of the ES5D21G08T00.

**Figure 8-27** ES5D21G08T00



## Functions

**Table 8-60** describes functions of the ES5D21G08T00.

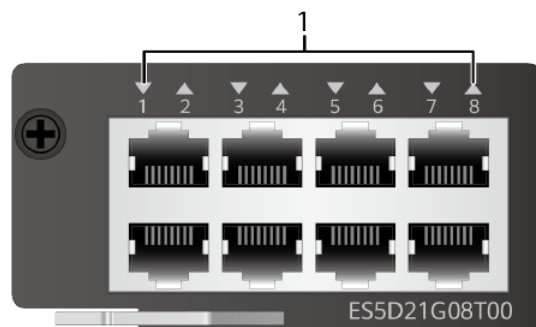
**Table 8-60** Functions

Function	Description
Basic function	Provides eight 10M/100M/1000M electrical ports for data access and line-rate switching.
Hot swapping	Supported

## Indicators and Ports

**Figure 8-28** shows indicators on the ES5D21G08T00.

**Figure 8-28** Indicators on the ES5D21G08T00



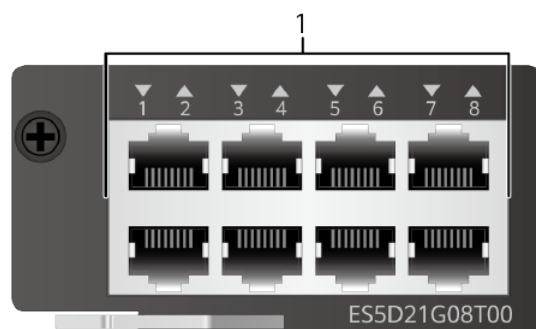
**Table 8-61** describes indicator status on the ES5D21G08T00.

**Table 8-61** Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"><li>Steady on: A link is established on the port.</li><li>Blinking: The port is sending or receiving data.</li></ul>
		Off	No link is established on the port.

**Figure 8-29** shows ports on the ES5D21G08T00.

**Figure 8-29** Ports on the ES5D21G08T00



1. Eight 10/100/1000BASE-T electrical ports

### 10/100/1000BASE-T electrical port

The ES5D21G08T00 provides eight 10M/100M/1000M Ethernet electrical ports to transmit and receive Ethernet service data. The eight 10/100/1000BASE-T Ethernet electrical ports must be used with [9.4 Ethernet Cable](#). [Table 8-62](#) describes attributes of the 10/100/1000BASE-T electrical port.

**Table 8-62** Attributes of the 10/100/1000BASE-T electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, and IEEE802.3ab

## Technical Specifications

**Table 8-63** lists technical specifications of the ES5D21G08T00.

**Table 8-63** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>• Dimensions (H x W x D): 42 mm x 77 mm x 207 mm (1.7 in. x 3.0 in. x 8.1 in.)</li> <li>• Weight: 0.3 kg (0.66 lb)</li> <li>• Maximum power consumption: 8.3 W</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

**Table 8-64** provides the ES5D21G08T00 ordering information.

**Table 8-64** Ordering information

Card Description	Card Name	Part Number
8-port GE electrical interface card (rear card)	ES5D21G08T00	03021ESN

## 8.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)

### Version Mapping

**Table 8-65** lists the mapping between the ES5D21X02S00 card and software versions.

**Table 8-65** Version mapping

Card Model	Software Version
ES5D21X02S00	V200R001C00 to V200R005C02 <b>NOTE</b> This module is not supported in V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

## Card Overview

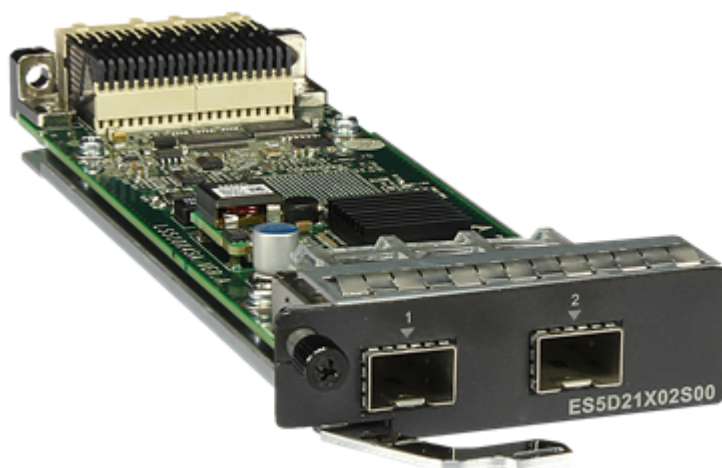
The ES5D21X02S00 provides two 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in a card slot of the switch models listed in [Table 8-66](#).

**Table 8-66** Applicable switch models

Card	Switch Model
ES5D21X02S00	<ul style="list-style-type: none"><li>• S5710-52C-PWR-EI</li><li>• S5710-52C-PWR-EI-AC</li><li>• S5710-28C-PWR-EI-AC</li><li>• S5710-52C-EI</li><li>• S5710-28C-EI</li></ul>

[Figure 8-30](#) shows the appearance of the ES5D21X02S00.

**Figure 8-30** ES5D21X02S00



## Functions

[Table 8-67](#) describes functions of the ES5D21X02S00.

**Table 8-67** Functions

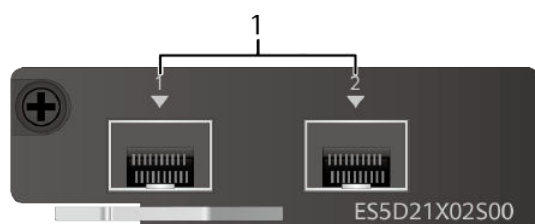
Function	Description
Basic function	Provides two 10GE SFP+ optical ports for data access and line-rate switching.
Hot swapping	Supported

Function	Description
Service port supporting the stack function	The ES5D21X02S00 can be used on the stack port of the switch.

## Indicators and Ports

**Figure 8-31** shows indicators on the ES5D21X02S00.

**Figure 8-31** Indicators on the ES5D21X02S00



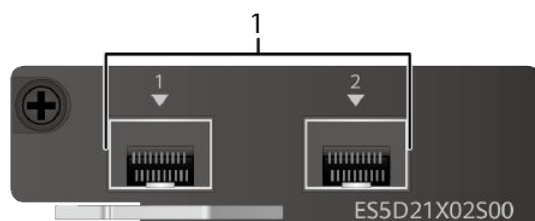
**Table 8-68** describes indicators on the ES5D21X02S00.

**Table 8-68** Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> <li>Steady on: A link is established on the port.</li> <li>Blinking: The port is sending or receiving data.</li> </ul>
		Off	No link is established on the port.

**Figure 8-32** shows ports on the ES5D21X02S00.

**Figure 8-32** Ports on the ES5D21X02S00



1. Two 10GE SFP+ optical ports



### 10GE SFP+ optical port

The ES5D21X02S00 provides two 10GE optical ports (auto-sensing GE ports) to transmit and receive Ethernet service data at 1 Gbit/s or 10 Gbit/s. [Table 8-69](#) describes attributes of an SFP+ optical port.

#### NOTE

The optical ports on the ES5D21X02S00 support 10GE SFP+ optical modules, GE SFP optical modules, GE copper modules (in V200R002C00 and later versions, used with shielded twisted pair cables), SFP+ copper cables (in V200R002C00 and later versions), and AOC cables (in V200R003C00 and later versions).

**Table 8-69** Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see <a href="#">10.5 GE eSFP Optical Modules</a> , <a href="#">10.7 GE-CWDM eSFP Optical Modules</a> , <a href="#">10.9 GE-DWDM eSFP Optical Modules</a> , <a href="#">10.10 GE SFP Copper Modules</a> , <a href="#">10.13 10GE SFP+ Optical Modules</a> , and <a href="#">10.14 10GE-CWDM SFP+ Optical Modules</a> )
Standards compliance	IEEE 802.3ae

## Technical Specifications

[Table 8-70](#) lists technical specifications of the ES5D21X02S00.

**Table 8-70** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"><li>• Dimensions (H x W x D): 23 mm x 77 mm x 207 mm (0.9 in. x 3.0 in. x 8.1 in.)</li><li>• Weight: 0.5 kg (1.10 lb)</li><li>• Maximum power consumption: 7 W</li></ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 8-71](#) provides the ES5D21X02S00 ordering information.

**Table 8-71** Ordering information

Card Description	Card Name	Part Number
2-port GE SFP or 10GE SFP+ optical interface card (rear card)	ES5D21X02S00	03021NTU

## 8.13 ES5D21G16S00 (16-Port GE SFP Front Optical Interface Card)

### Version Mapping

**Table 8-72** lists the mapping between the ES5D21G16S00 card and software versions.

**Table 8-72** Version mapping

Card Model	Software Version
ES5D21G16S00	V200R003C00 to V200R005C03  <b>NOTE</b> This module is not supported in V200R003C02, V200R003C10, or V200R005C01.

### Card Overview

The ES5D21G16S00 provides sixteen GE SFP optical ports for data access and line-rate switching.

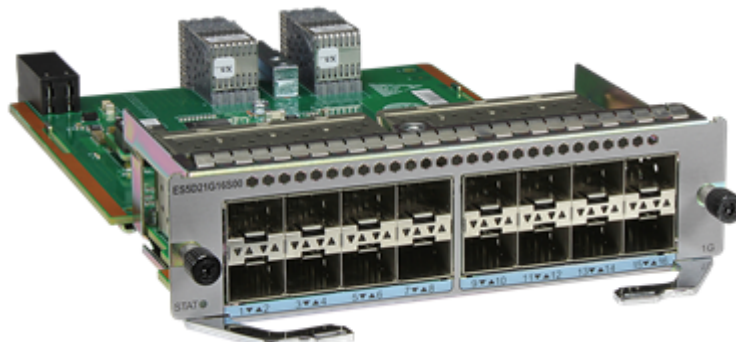
The ES5D21G16S00 can be installed in the front card slot of the switch models listed in **Table 8-73**.

**Table 8-73** Applicable switch models

Card	Switch Model
ES5D21G16S00	S5710-108C-PWR-HI

**Figure 8-33** shows the appearance of the ES5D21G16S00.

**Figure 8-33** ES5D21G16S00



## Functions

**Table 8-74** describes functions of the ES5D21G16S00.

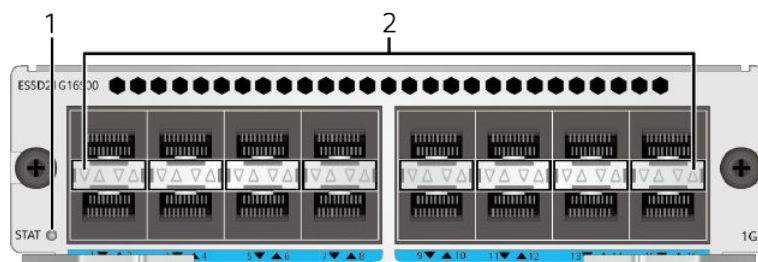
**Table 8-74** Functions

Function	Description
Basic function	Provides sixteen GE SFP optical ports for data access and line-rate switching.
Hot swapping	Supported

## Indicators and Ports

**Figure 8-34** shows indicators on the ES5D21G16S00.

**Figure 8-34** Indicators on the ES5D21G16S00

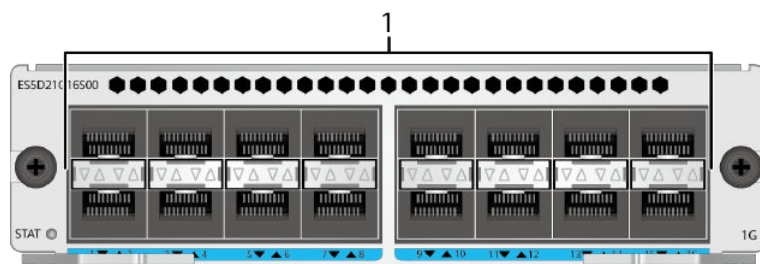


**Table 8-75** describes indicator status on the ES5D21G16S00.

**Table 8-75** Description of indicators on the ES5D21G16S00

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> <li>Steady on: The system is starting.</li> <li>Blinking: The system is running properly.</li> </ul>
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	Two single-color indicators for each port <ul style="list-style-type: none"> <li>Steady green: LINK indicator</li> <li>Blinking amber: ACT indicator</li> </ul> <b>NOTE</b> Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.	Green	<ul style="list-style-type: none"> <li>Steady on: The link on the port is connected.</li> <li>Off: The link on the port is disconnected.</li> </ul>
		Yellow	<ul style="list-style-type: none"> <li>Blinking: The port is transmitting or receiving data.</li> <li>Off: The port is not transmitting or receiving data.</li> </ul>

**Figure 8-35** shows the ports on the ES5D21G16S00.

**Figure 8-35** Ports on the ES5D21G16S00

1. Sixteen GE SFP optical ports

**GE SFP optical port**

The ES5D21G16S00 provides sixteen GE SFP optical ports to transmit and receive service data at 1 Gbit/s. [Table 8-76](#) lists the attributes of a GE SFP optical port.

**NOTE**

The optical ports on the ES5D21G16S00 support GE optical modules.

**Table 8-76** Attributes of a GE SFP optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see <a href="#">10.5 GE eSFP Optical Modules</a> , <a href="#">10.7 GE-CWDM eSFP Optical Modules</a> , and <a href="#">10.9 GE-DWDM eSFP Optical Modules</a> )
Standards compliance	IEEE 802.3z

**Technical Specifications**

[Table 8-77](#) lists specifications of the ES5D21G16S00.

**Table 8-77** Specifications of the ES5D21G16S00

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>• Dimensions (H x W x D): 39.6 mm x 145.0 mm x 233 mm (1.6 in. x 5.7 in. x 9.2 in.)</li> <li>• Weight: 0.7 kg (1.54 lb)</li> <li>• Maximum power consumption: 11.7 W</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

**Table 8-78** provides ES5D21G16S00 ordering information.

**Table 8-78** Ordering information

Card Description	Card Name	Part Number
16-port GE SFP optical interface card (front card)	ES5D21G16S00	03021PED

## 8.14 ES5D21G16T00 (16-Port GE Front Electrical Interface Card)

### Version Mapping

**Table 8-79** lists the mapping between the ES5D21G16T00 card and software versions.

**Table 8-79** Version mapping

Card Model	Software Version
ES5D21G16T00	V200R003C00 to V200R005C03 <b>NOTE</b> This module is not supported in V200R003C02, V200R003C10, or V200R005C01.

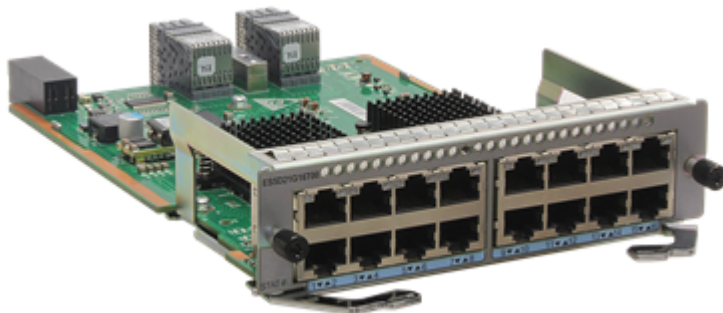
### Card Overview

The ES5D21G16T00 provides sixteen GE electrical ports for data access and line-rate switching.

The ES5D21G16T00 can be installed in the front card slot of the S5710-108C-PWR-HI.

**Figure 8-36** shows the appearance of the ES5D21G16T00.

**Figure 8-36** ES5D21G16T00



## Functions

**Table 8-80** describes functions of the ES5D21G16T00.

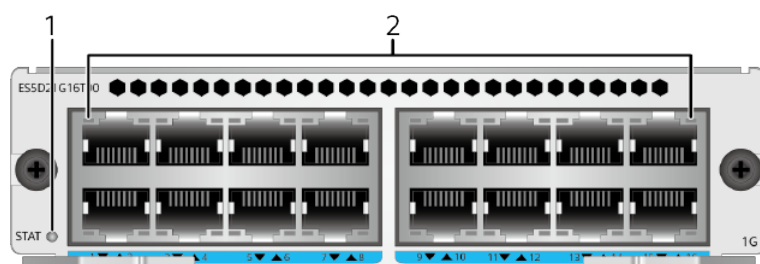
**Table 8-80** Functions

Function	Description
Basic function	Provides sixteen GE electrical ports for data access and line-rate switching.
Hot swapping	Supported

## Indicators and Ports

**Figure 8-37** shows indicators on the ES5D21G16T00.

**Figure 8-37** Indicators on the ES5D21G16T00



**Table 8-81** describes indicator status on the ES5D21G16T00.

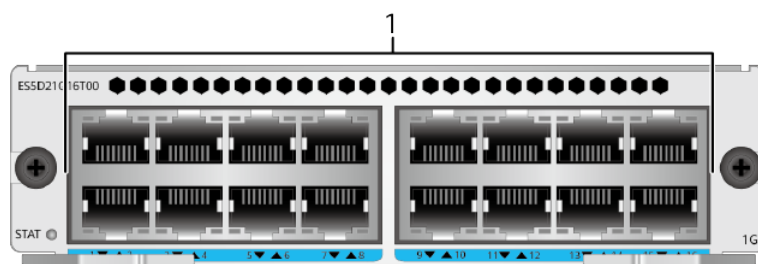
**Table 8-81** Description of indicators on the ES5D21G16T00

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.

Number	Indicator	Color	Description
		Green	<ul style="list-style-type: none"> <li>Steady on: The system is starting.</li> <li>Blinking: The system is running properly.</li> </ul>
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	One single-color indicator for each port  <b>NOTE</b> The indicator on the left indicates the port at the top, and the indicator on the right indicates the port at the bottom.	Green	<ul style="list-style-type: none"> <li>Steady on: A link is established on the port.</li> <li>Blinking: The port is transmitting or receiving data.</li> </ul>
		Off	No link is established on the port.

Figure 8-38 shows the ports on the ES5D21G16T00.

Figure 8-38 Ports on the ES5D21G16T00



1. Sixteen 10M/100M/1000M BASE-T ports

### 10M/100M/1000M BASE-T port

The ES5D21G16T00 provides sixteen 10M/100M/1000M BASE-T ports to transmit and receive Ethernet service data. Table 8-82 lists the attributes of a 10M/100M/1000M BASE-T port.



**Table 8-82** Attributes of a 10M/100M/1000M BASE-T port

Attribute	Description
Connector type	RJ45
Electrical port attributes	MDI/MDIX
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

## Technical Specifications

**Table 8-83** lists technical specifications of the ES5D21G16T00.

**Table 8-83** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>Dimensions (H x W x D): 39.6 mm x 145.0 mm x 233 mm (1.6 in. x 5.7 in. x 9.2 in.)</li> <li>Weight: 0.7 kg (1.54 lb)</li> <li>Maximum power consumption: 9.5 W</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

**Table 8-84** provides ES5D21G16T00 ordering information.

**Table 8-84** Ordering information

Card Description	Card Name	Part Number
16-port GE RJ45 interface card (front card)	ES5D21G16T00	03021NXB

## 8.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card)

### Version Mapping

**Table 8-85** lists the mapping between the ES5D21Q02Q00 and software versions.

**Table 8-85** Version mapping

Card Model	Software Version
ES5D21Q02Q00	S5730-HI: V200R012C00 to V200R019C10 versions S5731-H and S5731S-H: V200R019C00 and later versions S5736-S: V200R020C00 and later versions S5735S-H: V200R021C01 and later versions

## Card Overview

The ES5D21Q02Q00 provides two 40GE QSFP+ optical ports for data access and line-rate switching.

The ES5D21Q02Q00 can be installed in a rear card slot of the switch models listed in [Table 8-86](#).

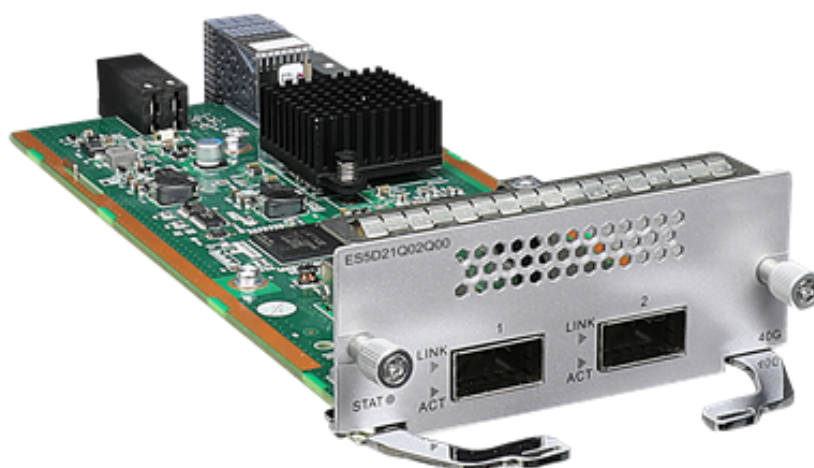
**Table 8-86** Applicable switch models

Card	Switch Model
ES5D21Q02Q00	<ul style="list-style-type: none"><li>● S5730-36C-HI</li><li>● S5730-36C-PWH-HI</li><li>● S5730-44C-HI (can be installed only in slot 1)</li><li>● S5730-44C-PWH-HI (can be installed only in slot 1)</li><li>● S5730-60C-HI</li><li>● S5730-60C-PWH-HI</li><li>● S5730-68C-HI (can be installed only in slot 1)</li><li>● S5730-68C-PWH-HI (can be installed only in slot 1)</li><li>● S5730-44C-HI-24S (can be installed only in slot 1)</li><li>● S5730-36C-HI-24S</li><li>● S5730-60C-HI-48S</li><li>● S5730-68C-HI-48S (can be installed only in slot 1)</li><li>● S5731-H24T4XC</li><li>● S5731-H24P4XC</li><li>● S5731-H48T4XC</li><li>● S5731-H48P4XC</li><li>● S5731S-H24T4XC-A</li><li>● S5731S-H48T4XC-A</li><li>● S5731-H24HB4XZ</li><li>● S5731-H48HB4XZ</li><li>● S5731S-H24HB4XZ-A</li><li>● S5731S-H48HB4XZ-A</li><li>● S5735S-H24S4XC-A</li><li>● S5736-S24UM4XC</li><li>● S5736-S24S4XC</li><li>● S5736-S48S4XC</li></ul>

**Figure 8-39** ES5D21Q02Q00 (old)



**Figure 8-40** ES5D21Q02Q00 (new)



## Functions

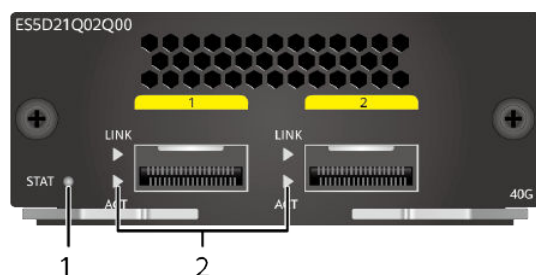
**Table 8-87** describes functions of the ES5D21Q02Q00.

**Table 8-87** Functions

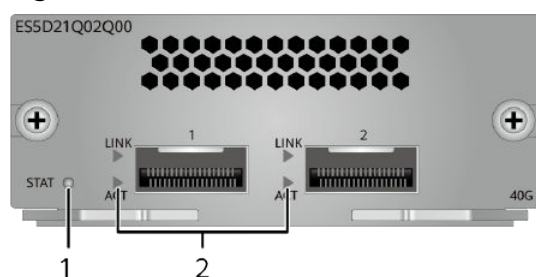
Function	Description
Basic functions	Provides two 40GE QSFP+ optical ports for data access and line-rate switching. Each 40GE port can be split into four 10GE ports.
Hot swapping	Supported
Service port stacking	Ports on the card can be used as stack ports. <b>NOTE</b> A 40GE port cannot be used as a stack port after it is split into four 10GE ports.

## Indicators and Ports

**Figure 8-41** Indicators on the ES5D21Q02Q00 (old)



**Figure 8-42** Indicators on the ES5D21Q02Q00 (new)

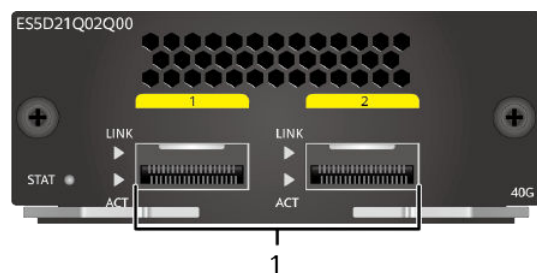


**Table 8-88** describes indicators on the ES5D21Q02Q00.

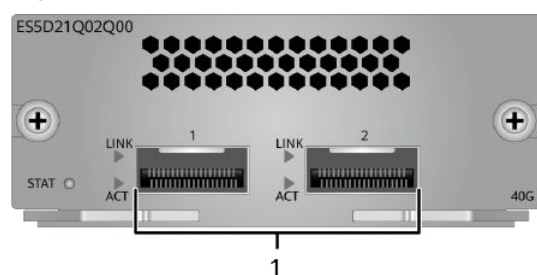
**Table 8-88** Indicator description

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> <li>Fast blinking: The system is starting.</li> <li>Slow blinking: The system is running normally.</li> </ul>
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	LINK	Off	No link is established on the port.
		Green	Steady on: A link is established on the port.
	ACT	Off	The port is not transmitting or receiving data.
		Yellow	Blinking: The port is transmitting or receiving data.

**Figure 8-43** Ports on the ES5D21Q02Q00 (old)



**Figure 8-44** Ports on the ES5D21Q02Q00 (new)



1. Two 40GE QSFP+ optical ports

#### 40GE QSFP+ optical port

A 40GE QSFP+ optical port sends and receives service traffic at 40 Gbit/s and can be split into four 10GE ports. After a split, the 40GE QSFP+ optical port needs to be connected to a remote device using a 1-to-4 QSFP+ fiber (with matching optical modules), a 1-to-4 QSFP+ AOC cable, or a 1-to-4 QSFP+ copper cable.

**Table 8-89** lists the attributes of a 40GE QSFP+ optical port.

#### NOTE

Both optical ports on the ES5D21Q02Q00 support only QSFP+ optical modules, QSFP+ AOC cables (10 m; QSFP+ to QSFP+ or QSFP+ to 4\*SFP+), and QSFP+ copper cables (1 m, 3 m, and 5 m; QSFP+ to QSFP+ or QSFP+ to 4\*SFP+).

**Table 8-89** Attributes of a QSFP+ optical port

Attribute	Description
Connector type	LC/MPO
Optical attributes	Depend on the optical module used (see <a href="#">10.17 40GE QSFP+ Optical Modules</a> )

Attribute	Description
Standards compliance	IEEE 802.3ba

## Technical Specifications

**Table 8-90** lists technical specifications of the ES5D21Q02Q00.

**Table 8-90** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.)</li> <li>Weight: 0.92 kg (2.03 lb)</li> <li>Maximum power consumption: 9 W</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

**Table 8-91** provides the ES5D21Q02Q00 ordering information.

**Table 8-91** Ordering information

Card Description	Card Model	Part Number
2-port 40 Gig QSFP+ rear interface card	ES5D21Q02Q00	03024EHT

## 8.16 ES5D21L04Q00 (4-Port 40GE QSFP+ Optical Interface Card)

### Version Mapping

**Table 8-92** lists the mapping between the ES5D21L04Q00 card and software versions.

**Table 8-92** Version mapping

Card Model	Software Version
ES5D21L04Q00	V200R003C00 to V200R005C03 <b>NOTE</b> This module is not supported in V200R003C02, V200R003C10, or V200R005C01.

## Card Overview

The ES5D21L04Q00 provides four 40GE QSFP+ optical ports for data access and line-rate switching.

The ES5D21L04Q00 can be installed in the front card slot of the S5710-108C-PWR-HI.

**Figure 8-45** shows the appearance of the ES5D21L04Q00.

**Figure 8-45** ES5D21L04Q00



## Functions

**Table 8-93** describes functions of the ES5D21L04Q00.

**Table 8-93** Functions

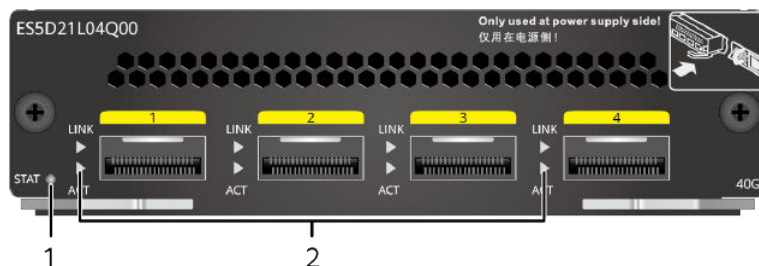
Function	Description
Basic function	Provides four 40GE QSFP+ optical ports for data access and line-rate switching.
Hot swapping	Supported

## Indicators and Ports

**Figure 8-46** shows indicators on the ES5D21L04Q00.



**Figure 8-46** Indicators on the ES5D21L04Q00



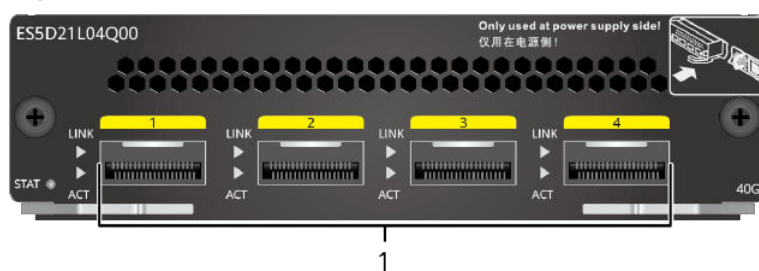
**Table 8-94** describes indicator status on the ES5D21L04Q00.

**Table 8-94** Description of indicators on the ES5D21L04Q00

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> <li>Steady on: The system is starting.</li> <li>Blinking: The system is running properly.</li> </ul>
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	LINK	Green	Steady on: A link is established on the port.
		Off	No link is established on the port.
	ACT	Yellow	Blinking: The port is transmitting or receiving data.
		Off	No data is transmitting or receiving on the port.

**Figure 8-47** shows the ports on the ES5D21L04Q00.

**Figure 8-47** Ports on the ES5D21L04Q00



1. Four 40GE QSFP+ optical ports

### 40GE QSFP+ optical port

The ES5D21L04Q00 provides four 40GE QSFP+ optical ports to transmit and receive service data at 40 Gbit/s. [Table 8-95](#) lists the attributes of a 40GE QSFP+ optical port.

#### NOTE

All the optical ports on the ES5D21L04Q00 support only QSFP+ optical modules and QSFP+ copper cables.

**Table 8-95** Attributes of a 40GE QSFP+ optical port

Attribute	Description
Connector type	LC/MPO
Optical port attributes	Depend on the optical module used (see <a href="#">10.17 40GE QSFP+ Optical Modules</a> )
Standards compliance	IEEE 802.3ba

## Technical Specifications

[Table 8-96](#) lists technical specifications of the ES5D21L04Q00.

**Table 8-96** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>Dimensions (H x W x D): 39.6 mm x 145.0 mm x 233 mm (1.6 in. x 5.7 in. x 9.2 in.)</li> <li>Weight: 0.7 kg (1.54 lb)</li> <li>Maximum power consumption: 25.7 W</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 8-97](#) provides ES5D21L04Q00 ordering information.

**Table 8-97** Ordering information

Card Description	Card Name	Part Number
4-port 40GE QSFP+ optical interface card (rear card)	ES5D21L04Q00	03021NKW

## 8.17 ES5D21Q04Q01 (4-Port 40 Gig QSFP+ Rear Interface Card)

### Version Mapping

**Table 8-98** lists the mapping between the ES5D21Q04Q01 card and software versions.

**Table 8-98** Version mapping

Card Model	Software Version
ES5D21Q04Q01	S5730-SI and S5730S-EI: V200R011C10 to V200R019C10 versions S5736-S: V200R020C00 and later versions S5735S-H: V200R021C01 and later versions

### Card Overview

The ES5D21Q04Q01 provides four 40GE QSFP+ optical ports for data access and line-rate switching.

The ES5D21Q04Q01 can be installed in a rear card slot of the switch models listed in **Table 8-99**.

**Table 8-99** Applicable switch models

Card	Switch Model
ES5D21Q04Q01	<ul style="list-style-type: none"><li>• S5730-48C-SI-AC</li><li>• S5730-48C-PWR-SI-AC</li><li>• S5730S-48C-EI-AC</li><li>• S5730S-48C-PWR-EI</li><li>• S5730-68C-SI-AC</li><li>• S5730S-68C-EI-AC</li><li>• S5730-68C-PWR-SI-AC</li><li>• S5730-68C-PWR-SI</li><li>• S5730S-68C-PWR-EI</li><li>• S5735S-H24S4XC-A</li><li>• S5736-S24UM4XC</li><li>• S5736-S24S4XC</li><li>• S5736-S48S4XC</li></ul>

**Figure 8-48** ES5D21Q04Q01 (old)



**Figure 8-49** ES5D21Q04Q01 (new)



## Functions

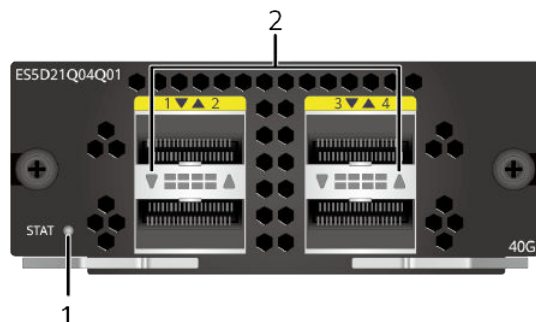
**Table 8-100** describes functions of the card.

**Table 8-100** Functions

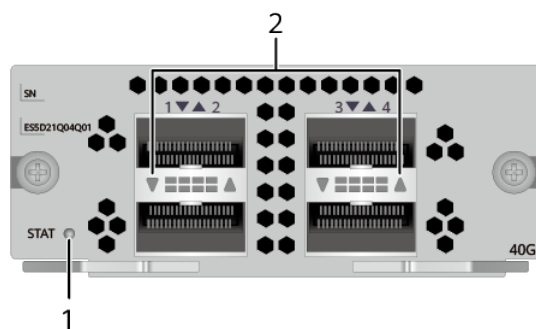
Function	Description
Basic functions	Provides four 40GE QSFP+ optical ports for data access and line-rate switching. Each 40GE port can be split into four 10GE ports.
Hot swapping	Supported
Service port stacking	Ports on the card can be used as stack ports. <b>NOTE</b> A 40GE port cannot be used as a stack port after it is split into four 10GE ports.

## Indicators and Ports

**Figure 8-50** Indicators on the ES5D21Q04Q01 (old)



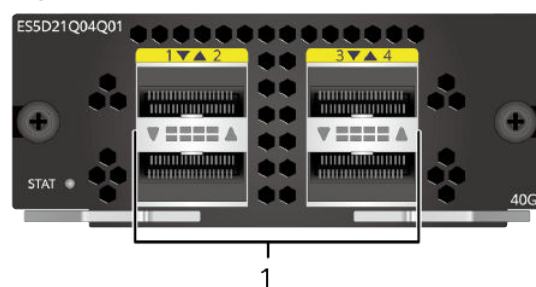
**Figure 8-51** Indicators on the ES5D21Q04Q01 (new)

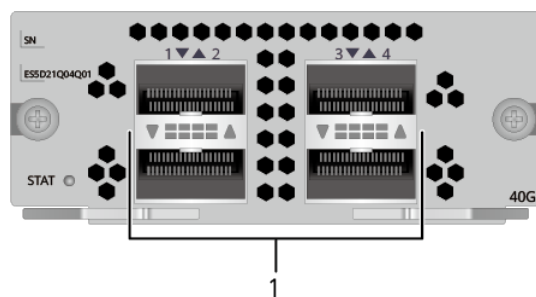


**Table 8-101** Description of indicators on the card

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> <li>Fast blinking: The system is starting.</li> <li>Slow blinking: The system is running normally.</li> </ul>
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	ACT/LINK	Green	<ul style="list-style-type: none"> <li>Steady on: A link has been established on the port.</li> <li>Blinking: The port is transmitting or receiving data.</li> </ul>
		Off	No link is established on the port.

**Figure 8-52** Ports on the ES5D21Q04Q01 (old)



**Figure 8-53** Ports on the ES5D21Q04Q01 (new)

1. Four 40GE QSFP+ optical ports

#### 40GE QSFP+ optical port

A 40GE QSFP+ optical port sends and receives service traffic at 40 Gbit/s and can be split into four 10GE ports. After a split, the 40GE QSFP+ optical port needs to be connected to a remote device using a 1-to-4 QSFP+ fiber (with matching optical modules), a 1-to-4 QSFP+ AOC cable (applicable in V200R009C00 and later versions), or a 1-to-4 QSFP+ copper cable. [Table 8-102](#) lists the attributes of a 40GE QSFP+ optical port.

#### NOTE

All the optical ports on the card support only QSFP+ optical modules, QSFP+ AOC cables (applicable in V200R009C00 and later versions; 10 m; QSFP+ to QSFP+ or QSFP+ to 4\*SFP+), and QSFP+ copper cables (1 m, 3 m, and 5 m; QSFP+ to QSFP+ or QSFP+ to 4\*SFP+).

**Table 8-102** Attributes of a QSFP+ optical port

Attribute	Description
Connector type	LC/MPO
Optical port attributes	Depend on the optical module used (see <a href="#">10.17 40GE QSFP+ Optical Modules</a> )
Standards compliance	IEEE 802.3ba

## Technical Specifications

**Table 8-103** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>• Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.)</li> <li>• Weight: 0.5 kg (1.10 lb)</li> <li>• Maximum power consumption: 18.83 W</li> </ul>
Environment specifications	<ul style="list-style-type: none"> <li>• Operating temperature: 0°C to 45°C (32°F to 113°F)</li> <li>• Relative humidity: 5% RH to 95% RH</li> <li>• Storage temperature: -40°C to +70°C (-40°F to +158°F)</li> </ul> <p><b>NOTE</b> When an ES5D21Q04Q01 card on the S5730-SI or S5730S-EI has a 40 km QSFP+ optical module installed, the operating temperature must be in the range of 0°C to 40°C.</p>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

**Table 8-104** Ordering information

Card Description	Card Name	Part Number
4-port 40 Gig QSFP+ interface card	ES5D21Q04Q01	03022RRP

## 8.18 ES5D21X04S00 (4-Port 10GE SFP+ Rear Optical Interface Card)

### Version Mapping

**Table 8-105** lists the mapping between the ES5D21X04S00 card and software versions.



**Table 8-105** Version mapping

Card Model	Software Version
ES5D21X04S00	V200R003C00 to V200R005C03 <b>NOTE</b> This module is not supported in V200R003C02, V200R003C10, or V200R005C01.

## Card Overview

The ES5D21X04S00 provides four 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in the rear card slot of the S5710-108C-PWR-HI.

[Figure 8-54](#) shows the appearance of the ES5D21X04S00.

**Figure 8-54** ES5D21X04S00

## Functions

[Table 8-106](#) describes functions of the ES5D21X04S00.

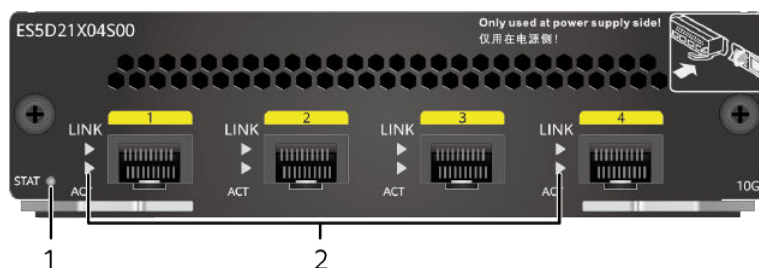
**Table 8-106** Functions

Function	Description
Basic function	Provides four 10GE SFP+ optical ports for data access and line-rate switching.
Hot swapping	Supported

## Indicators and Ports

[Figure 8-55](#) shows indicators on the ES5D21X04S00.

**Figure 8-55** Indicators on the ES5D21X04S00



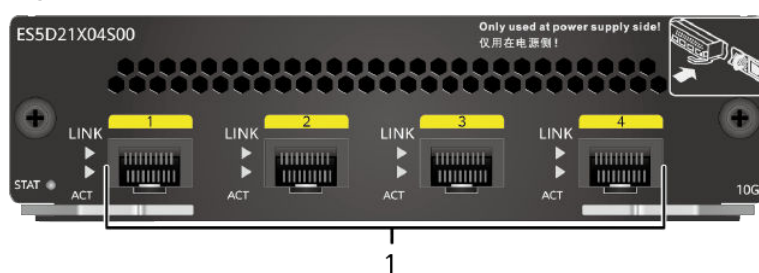
**Table 8-107** describes indicator status on the ES5D21X04S00.

**Table 8-107** Description of indicators on the ES5D21X04S00

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> <li>Steady on: The system is starting.</li> <li>Blinking: The system is running properly.</li> </ul>
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	LINK	Green	Steady on: A link is established on the port.
		Off	No link is established on the port.
	ACT	Yellow	Blinking: The port is transmitting or receiving data.
		Off	No data is transmitting or receiving on the port.

**Figure 8-56** shows the ports on the ES5D21X04S00.

**Figure 8-56** Ports on the ES5D21X04S00



1. Four 10GE SFP+ optical ports

### 10GE SFP+ optical port

The ES5D21X04S00 provides four 10GE SFP+ optical ports to transmit and receive service data at 10 Gbit/s. [Table 8-108](#) lists the attributes of a 10GE SFP+ optical port.

#### NOTE

The four optical ports on the ES5D21X04S00 support only 10GE SFP+ optical modules, SFP+ copper cables, and AOC cables.

**Table 8-108** Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see <a href="#">10.13 10GE SFP+ Optical Modules</a> and <a href="#">10.14 10GE-CWDM SFP+ Optical Modules</a> )
Standards compliance	IEEE 802.3ae

## Technical Specifications

[Table 8-109](#) lists technical specifications of the ES5D21X04S00.

**Table 8-109** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>• Dimensions (H x W x D): 39.6 mm x 145.0 mm x 233 mm (1.6 in. x 5.7 in. x 9.2 in.)</li> <li>• Weight: 0.7 kg (1.54 lb)</li> <li>• Maximum power consumption: 11.23 W</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 8-110](#) provides the ES5D21X04S00 ordering information.

**Table 8-110** Ordering information

Card Description	Card Name	Part Number
4-port 10GE SFP+ optical interface card (rear card)	ES5D21X04S00	03021PHQ

## 8.19 ES5D21X04S01 (4-Port 10 GE SFP+ Rear Interface Card)

### Version Mapping

**Table 8-111** lists the mapping between the card and software versions.

**Table 8-111** Version mapping

Card Model	Software Version
ES5D21X04S01	V200R006C00 to V200R019C10 versions

### Card Overview

The ES5D21X04S01 provides four 10GE SFP+ optical ports for data access and line-rate switching.

The ES5D21X04S01 can be installed in rear card slot 2 of the S5720-HI.

**Table 8-112** Applicable switch models

Card	Switch Model
ES5D21X04S01	<ul style="list-style-type: none"> <li>• S5720-32C-HI-24S-AC</li> <li>• S5720-56C-HI-AC</li> <li>• S5720-56C-PWR-HI-AC</li> <li>• S5720-56C-PWR-HI-AC1</li> </ul>

**Figure 8-57** ES5D21X04S01



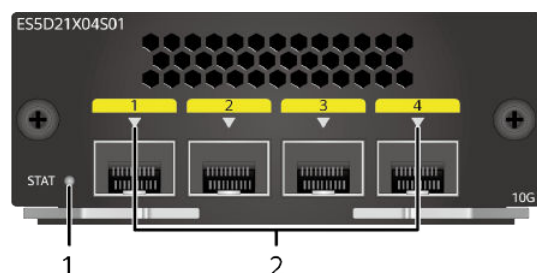
## Functions

**Table 8-113** Functions

Function	Item
Basic function	Provides four 10GE SFP+ optical ports for data access and line-rate switching.
Hot swapping	Supported
Service ports for stacking	The service ports on the card can be used as stack ports. <b>NOTE</b> The S5720-HI has supported service port-based stacking since V200R009C00.

## Indicators and Ports

**Figure 8-58** Indicators on the ES5D21X04S01

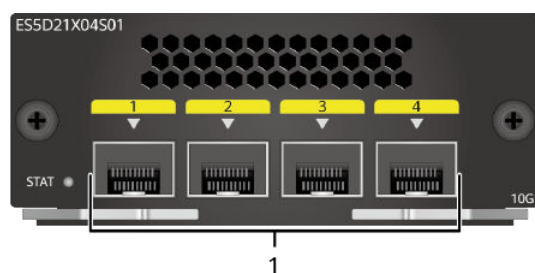


**Table 8-114** Description of indicators

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> <li>Fast blinking: The system is starting.</li> <li>Slow blinking: The system is running properly.</li> </ul>
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.

Number	Indicator	Color	Description
2	ACT/LINK	Green	<ul style="list-style-type: none"> <li>Steady on: A link is established on the port.</li> <li>Blinking: The port is transmitting or receiving data.</li> </ul>
		Off	No link is established on the port.

**Figure 8-59** Ports on the ES5D21X04S01



1. Four 10GE SFP+ optical ports

### 10GE SFP+ optical port

The card provides four 10GE SFP+ optical ports to transmit and receive service data at 10 Gbit/s. [Table 8-115](#) lists the attributes of a 10GE SFP+ optical port.

#### NOTE

When the card is installed on the S5720-HI, the four 10GE SFP+ optical ports support only 10GE SFP+ optical modules, SFP+ cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), and AOC cables (3 m and 10 m; SFP+ to SFP+).

**Table 8-115** Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see <a href="#">10.13 10GE SFP+ Optical Modules</a> , <a href="#">10.14 10GE-CWDM SFP+ Optical Modules</a> , and <a href="#">10.15 10GE-DWDM SFP+ Optical Modules</a> )
Standards compliance	IEEE 802.3ae

## Technical Specifications

**Table 8-116** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>• Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.)</li> <li>• Weight: 0.76 kg (1.68 lb)</li> <li>• Maximum power consumption: 9.95 W</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

**Table 8-117** provides ordering information of the card.

**Table 8-117** Ordering information

Card Description	Card Name	Part number
4-port 10 GE SFP+ rear interface card	ES5D21X04S01	03022MDR

## 8.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series)

### Version Mapping

**Table 8-118** lists the mapping between the ES5D21X02S01 card and software versions.

**Table 8-118** Version mapping

Card Model	Software Version
ES5D21X02S01	V200R007C00 to V200R019C10 versions <b>NOTE</b> This module is not supported in V200R007C10.

## Card Overview

The ES5D21X02S01 provides two 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in a rear card slot of the switch models listed in [Table 8-119](#).

**Table 8-119** Applicable switch models

Card	Switch Model
ES5D21X02S01	S5720-C-EI and S5720-PC-EI series

[Figure 8-60](#) shows the appearance of the ES5D21X02S01.

**Figure 8-60** ES5D21X02S01



## Functions

[Table 8-120](#) describes functions of the ES5D21X02S01.

**Table 8-120** Functions

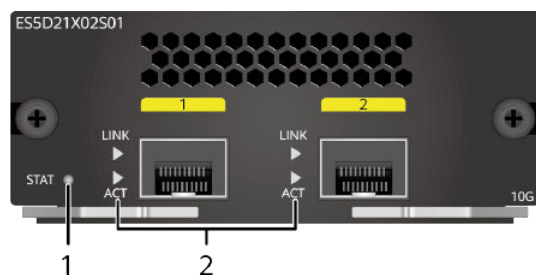
Function	Item
Basic function	Provides two 10GE SFP+ optical ports for data access and line-rate switching.
Hot swapping	Supported
Service port stacking	Ports on the card can be used as stack ports.

## Indicators and Ports

[Figure 8-61](#) shows indicators on the ES5D21X02S01.



**Figure 8-61** Indicators on the ES5D21X02S01



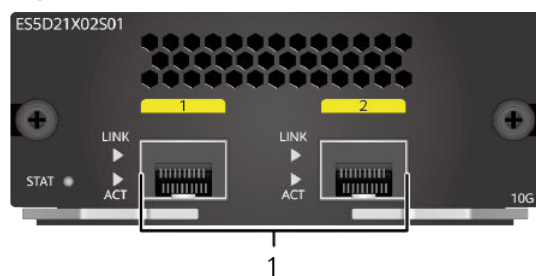
**Table 8-121** describes indicators on the ES5D21X02S01.

**Table 8-121** Description of indicators on the ES5D21X02S01

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> <li>Fast blinking: The system is starting.</li> <li>Slow blinking: The system is running normally.</li> </ul>
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	LINK	Off	No link is established on the port.
		Green	Steady on: A link is established on the port.
	ACT	Off	The port is not transmitting or receiving data.
		Yellow	Blinking: The port is transmitting or receiving data.

**Figure 8-62** shows the ports on the ES5D21X02S01.

**Figure 8-62** Ports on the ES5D21X02S01



1. Two 10GE SFP+ optical ports

### 10GE SFP+ optical port

10GE SFP+ optical ports on the ES5D21X02S01 can only transmit and receive service data at 10 Gbit/s. [Table 8-122](#) lists the attributes of a 10GE SFP+ optical port.

#### NOTE

The two optical ports on the ES5D21X02S01 support only 10GE SFP+ optical modules, SFP+ copper cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), and AOC cables (3 m and 10 m; SFP+ to SFP+).

**Table 8-122** Attributes of a 10GE SFP+ optical port

Attribute	Item
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see <a href="#">10.13 10GE SFP+ Optical Modules</a> , <a href="#">10.14 10GE-CWDM SFP+ Optical Modules</a> , and <a href="#">10.15 10GE-DWDM SFP+ Optical Modules</a> )
Standards compliance	IEEE 802.3ae

## Technical Specifications

[Table 8-123](#) lists technical specifications of the ES5D21X02S01.

**Table 8-123** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.)</li> <li>Weight: 0.78 kg (1.72 lb)</li> <li>Maximum power consumption: 8 W</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 8-124](#) provides the ES5D21X02S01 ordering information.

**Table 8-124** Ordering information

Card Description	Card Name	Part Number
2-port 10 Gig SFP+ interface card, used in S5720-EI series (rear card)	ES5D21X02S01	03022RMH

## 8.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series)

### Version Mapping

[Table 8-125](#) lists the mapping between the ES5D21X02T01 card and software versions.

**Table 8-125** Version mapping

Card Model	Software Version
ES5D21X02T01	V200R007C00 to V200R019C10 versions <b>NOTE</b> This module is not supported in V200R007C10.

### Card Overview

The ES5D21X02T01 provides two 10GBASE-T RJ45 electrical ports for data access and line-rate switching. It can be installed in a rear card slot of the switch models listed in [Table 8-126](#).

**Table 8-126** Applicable switch models

Card	Switch Model
ES5D21X02T01	S5720-C-EI and S5720-PC-EI series

[Figure 8-63](#) shows the appearance of the ES5D21X02T01.

**Figure 8-63** ES5D21X02T01



## Functions

[Table 8-127](#) describes functions of the ES5D21X02T01.

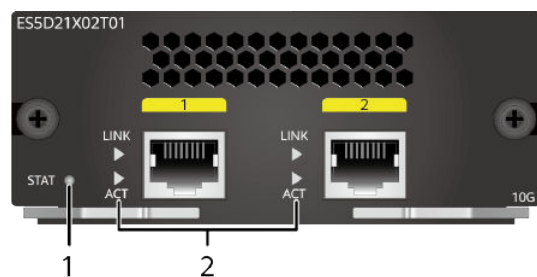
**Table 8-127** Functions

Function	Item
Basic function	Provides two 10GE RJ45 electrical ports for data access and line-rate switching.
Hot swapping	Supported
Service port stacking	Ports on the card can be used as stack ports.

## Indicators and Ports

[Figure 8-64](#) shows indicators on the ES5D21X02T01.

**Figure 8-64** Indicators on the ES5D21X02T01

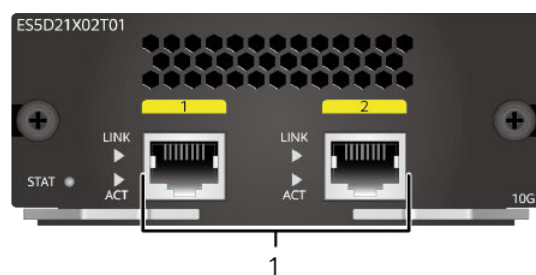


[Table 8-128](#) describes indicators on the ES5D21X02T01.

**Table 8-128** Description of indicators on the ES5D21X02T01

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"><li>Fast blinking: The system is starting.</li><li>Slow blinking: The system is running normally.</li></ul>
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	LINK	Off	No link is established on the port.
		Green	Steady on: A link is established on the port.
	ACT	Off	The port is not transmitting or receiving data.
		Yellow	Blinking: The port is transmitting or receiving data.

**Figure 8-65** shows the ports on the ES5D21X02T01.

**Figure 8-65** Ports on the ES5D21X02T01

1. Two 10GBASE-T RJ45 electrical ports

### 10GBASE-T RJ45 electrical port

The two 10GBASE-T RJ45 electrical ports on the ES5D21X02T01 can only transmit services at 10 Gbit/s and cannot work at 100 Mbit/s or 1000 Mbit/s. Category 6A shielded twisted pair (STP) cables are recommended for the ports. [Table 8-129](#) lists the attributes of a 10GBASE-T RJ45 electrical port.

**Table 8-129** Attributes of a 10GBASE-T RJ45 electrical port

Attribute	Item
Connector type	RJ45
Working Mode	10 Gbit/s
Standards compliance	IEEE802.3an, IEEE802.3az

**Table 8-130** lists the maximum transmission distances of different cables on 10GBASE-T RJ45 ports.

**Table 8-130** Maximum transmission distances of different cables on 10GBASE-T RJ45 ports

Cable Type (6-a-1 Bundle)	10GBASE-T RJ45 Port
Cat6A U/UTP	Not supported
Cat6A F/UTP	100 m
Cat6A STP	100 m
Cat7	100 m

**NOTE**

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

## Technical Specifications

**Table 8-131** lists technical specifications of the ES5D21X02T01.

**Table 8-131** Technical Specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"><li>Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.57 in. x 3.9 in. x 8.2 in.)</li><li>Weight: 0.78 kg (1.72 lb)</li><li>Maximum power consumption: 16 W</li></ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 8-132](#) provides the ES5D21X02T01 ordering information.

**Table 8-132** Ordering information

Card Description	Card Name	Part Number
2-port 10GBASE-T RJ45 interface card, used in S5720-EI series (rear card)	ES5D21X02T01	03022RMK

## 8.22 ES5D21X08S00 (8-Port 10GE SFP+ Rear Optical Interface Card)

### Version Mapping

[Table 8-133](#) lists the mapping between the ES5D21X08S00 card and software versions.

**Table 8-133** Version mapping

Card Model	Software Version
ES5D21X08S00	S5730-HI: V200R012C00 to V200R019C10 versions

### Card Overview

The ES5D21X08S00 provides eight 10GE SFP+ optical ports for data access and line-rate switching.

The ES5D21X08S00 can be installed in a rear card slot of the switch models listed in [Table 8-134](#).

**Table 8-134** Applicable switch models

Card	Switch Model
ES5D21X08S00	<ul style="list-style-type: none"> <li>• S5730-36C-HI</li> <li>• S5730-36C-PWH-HI</li> <li>• S5730-44C-HI (can be installed only in slot 1)</li> <li>• S5730-44C-PWH-HI (can be installed only in slot 1)</li> <li>• S5730-60C-HI</li> <li>• S5730-60C-PWH-HI</li> <li>• S5730-68C-HI (can be installed only in slot 1)</li> <li>• S5730-68C-PWH-HI (can be installed only in slot 1)</li> <li>• S5730-44C-HI-24S (can be installed only in slot 1)</li> <li>• S5730-36C-HI-24S</li> <li>• S5730-60C-HI-48S</li> <li>• S5730-68C-HI-48S (can be installed only in slot 1)</li> </ul>

**Figure 8-66** ES5D21X08S00



## Functions

**Table 8-135** Functions

Function	Description
Basic function	Provides eight 10GE SFP+ optical ports for data access and line-rate switching.



Function	Description
Hot swapping	Supported
Service ports for stacking	The service ports on the card can be used as stack ports. <b>NOTE</b> Only supported on the S5730-HI.

## Indicators and Ports

Figure 8-67 Indicators on the ES5D21X08S00

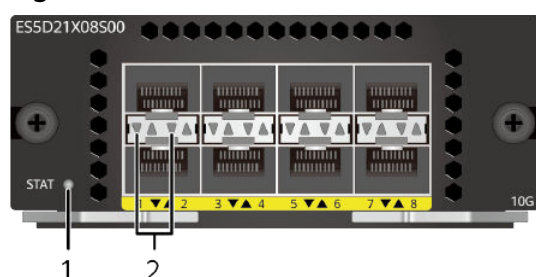
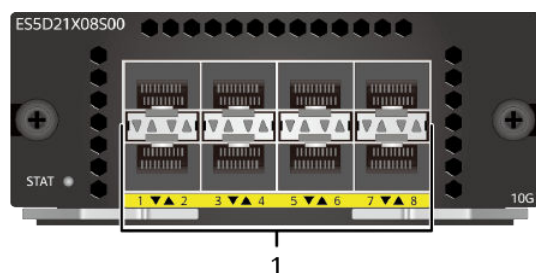


Table 8-136 Indicator description

No.	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> <li>Fast blinking: The system is starting.</li> <li>Slow blinking: The system is running properly.</li> </ul>
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	Two single-color indicators for each port <ul style="list-style-type: none"> <li>Steady green: LINK indicator</li> </ul>	Green	<ul style="list-style-type: none"> <li>Steady on: A link is established on the port.</li> <li>Off: No link is established on the port.</li> </ul>

No.	Indicator	Color	Description
	<ul style="list-style-type: none"> <li>Blinking yellow: ACT indicator</li> </ul> <p><b>NOTE</b>                      Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.</p>	Yellow	<ul style="list-style-type: none"> <li>Blinking: The port is transmitting or receiving data.</li> <li>Off: No data is transmitting or receiving on the port.</li> </ul>

**Figure 8-68** Ports on the ES5D21X08S00



1. Eight 10GE SFP+ optical ports

**10GE SFP+ optical port**

The ES5D21X08S00 provides 10GE SFP+ optical ports to transmit and receive service data at 1 Gbit/s or 10 Gbit/s. [Table 8-137](#) lists the attributes of a 10GE SFP+ optical port.

 **NOTE**

When the card is installed on the S5730-60C-HI, S5730-60C-PWH-HI, S5730-68C-HI, S5730-68C-PWH-HI, S5730-60C-HI-48S, or S5730-68C-HI-48S, ports 1 to 4 on the card only support the rate of 10 Gbit/s, and ports 5 to 8 support 1 Gbit/s and 10 Gbit/s.

When the card is installed on the S5730-36C-HI, S5730-36C-PWH-HI, S5730-44C-HI, S5730-44C-PWH-HI, S5730-36C-HI-24S, or S5730-44C-HI-24S, all ports on the card support 1 Gbit/s and 10 Gbit/s.

The 10GE SFP+ optical ports support GE optical modules (a maximum transmission distance of 40 km), GE copper modules, 10GE SFP+ optical modules (a maximum transmission distance of 10 km), SFP+ cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), and AOC cables (3 m and 10 m; SFP+ to SFP+).

**Table 8-137** Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module. For details, see <a href="#">10.5 GE eSFP Optical Modules</a> (a maximum transmission distance of 40 km), <a href="#">10.10 GE SFP Copper Modules</a> , and <a href="#">10.13 10GE SFP+ Optical Modules</a> (a maximum transmission distance of 10 km).
Standards compliance	IEEE 802.3ae

## Technical Specifications

**Table 8-138** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.57 in. x 3.94 in. x 8.19 in.)</li> <li>Weight: 0.26 kg (0.57 lb)</li> <li>Maximum power consumption: 35.8 W</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

**Table 8-139** provides the ES5D21X08S00 ordering information.

**Table 8-139** Ordering information

Card Description	Card Model	Part Number
8-port 10GE SFP+ rear optical interface card	ES5D21X08S00	98010738

## 8.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card)

### Version Mapping

[Table 8-140](#) lists the mapping between the ES5D21X08T00 and software versions.

**Table 8-140** Version mapping

Card Model	Software Version
ES5D21X08T00	S5730-HI: V200R012C00 to V200R019C10 versions S5731-H and S5731S-H: V200R019C00 and later versions

### Card Overview

The ES5D21X08T00 provides eight 10GBASE-T RJ45 ports for data access and line-rate switching. It can be installed in a rear card slot of the switch models listed in [Table 8-141](#).

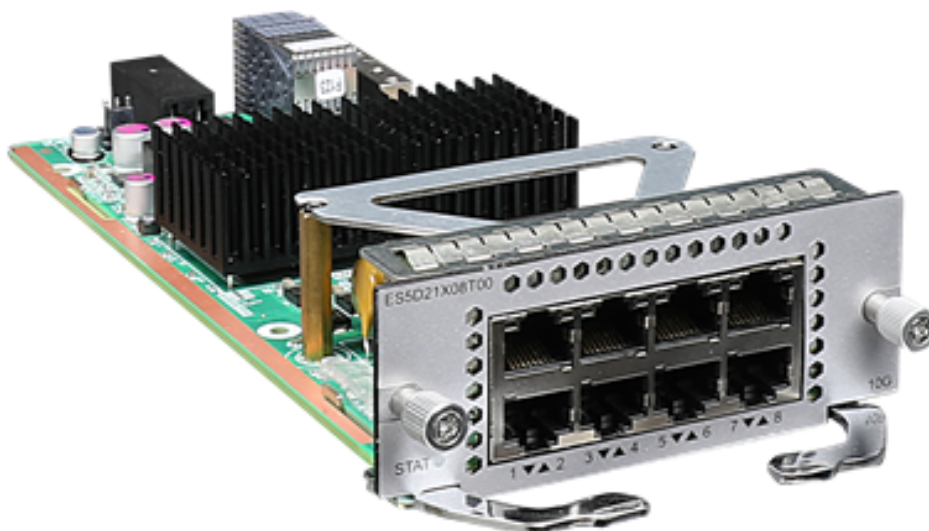
**Table 8-141** Applicable switch models

Card	Switch Model
ES5D21X08T00	<ul style="list-style-type: none"> <li>• S5730-36C-HI</li> <li>• S5730-44C-HI (can be installed only in slot 1)</li> <li>• S5730-36C-PWH-HI</li> <li>• S5730-44C-PWH-HI (can be installed only in slot 1)</li> <li>• S5730-60C-HI</li> <li>• S5730-68C-HI (can be installed only in slot 1)</li> <li>• S5730-60C-PWH-HI</li> <li>• S5730-68C-PWH-HI (can be installed only in slot 1)</li> <li>• S5730-44C-HI-24S (can be installed only in slot 1)</li> <li>• S5730-36C-HI-24S</li> <li>• S5730-60C-HI-48S</li> <li>• S5730-68C-HI-48S (can be installed only in slot 1)</li> <li>• S5731-H24T4XC</li> <li>• S5731-H24P4XC</li> <li>• S5731-H48T4XC</li> <li>• S5731-H48P4XC</li> <li>• S5731S-H24T4XC-A</li> <li>• S5731S-H48T4XC-A</li> <li>• S5731-H24HB4XZ</li> <li>• S5731-H48HB4XZ</li> <li>• S5731S-H24HB4XZ-A</li> <li>• S5731S-H48HB4XZ-A</li> </ul>

**Figure 8-69** ES5D21X08T00 (old)



**Figure 8-70** ES5D21X08T00 (new)



## Functions

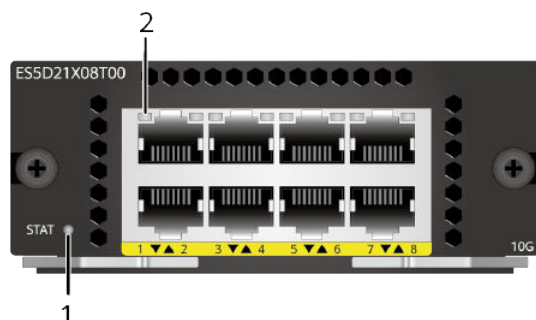
**Table 8-142** describes functions of the ES5D21X08T00.

**Table 8-142** Functions

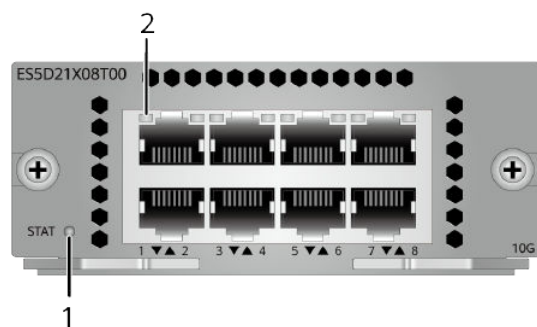
Function	Description
Basic function	Provides eight 10GE RJ45 ports for data access and line-rate switching.
Hot swapping	Supported
Service ports for stacking	The service ports on the card can be used as stack ports.

## Indicators and Ports

**Figure 8-71** Indicators on the ES5D21X08T00 (old)



**Figure 8-72** Indicators on the ES5D21X08T00 (new)

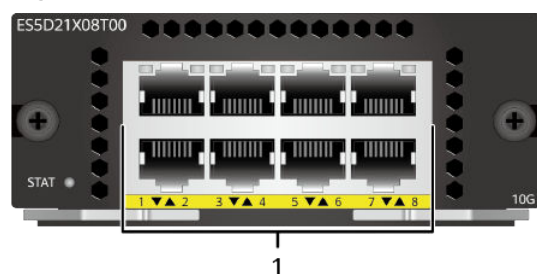


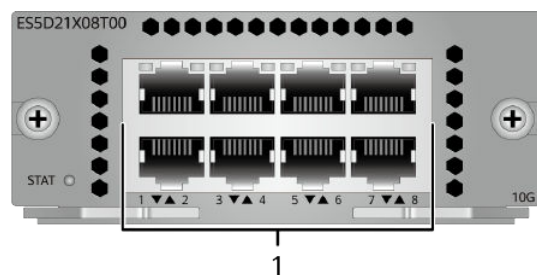
**Table 8-143** shows indicators on the ES5D21X08T00.

**Table 8-143** Indicator description

No.	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> <li>Fast blinking: The system is starting.</li> <li>Slow blinking: The system is running properly.</li> </ul>
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	ACT/LINK	Off	No link is established on the port.
		Green	Steady on: A link has been established on the port. Blinking: The port is transmitting or receiving data.

**Figure 8-73** Ports on the ES5D21X08T00 (old)



**Figure 8-74** Ports on the ES5D21X08T00 (new)

1. Eight 10GBASE-T RJ45 ports

### 10GBASE-T RJ45 port

The ES5D21X08T00 provides eight 10GBASE-T RJ-45 electrical ports. The first four electrical ports support only 10 Gbit/s. The last four electrical ports support only 10 Gbit/s in versions earlier than V200R019C00, and also support 100 Mbit/s and 1000 Mbit/s in auto-negotiation mode in V200R019C00 and later versions. When the ports work at 10 Gbit/s, Category 6A shielded Ethernet cables are recommended. [Table 8-144](#) lists the attributes of a 10GBASE-T RJ45 port.

**Table 8-144** Attributes of a 10GBASE-T RJ45 port

Attribute	Item
Connector type	RJ45
Standards compliance	IEEE802.3an, IEEE802.3az

[Table 8-145](#) lists the maximum transmission distances of different cables on 10GBASE-T RJ45 ports.

**Table 8-145** Maximum transmission distances of different cables on 10GBASE-T RJ45 ports

Cable Type (6-a-1 Bundle)	10GBASE-T RJ45 Port
Cat6A U/UTP	Not supported
Cat6A F/UTP	100 m
Cat6A STP	100 m
Cat7	100 m



 NOTE

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

If a port works at a rate of 10 Gbit/s and a Cat6A shielded Ethernet cable is used, the Ethernet cable must comply with ISO 11801 PL2 Class Ea (+All) or TIA Cat6A Channel (+All). Otherwise, serious problems such as continuous packet loss or interface flapping may occur.

If Cat5E, Cat6, or Cat6A unshielded twisted pairs are used on electrical ports working at 10 Gbit/s, severe problems such as continuous packet loss or port flapping may occur.

## Technical Specifications

[Table 8-146](#) lists technical specifications of the ES5D21X08T00.

**Table 8-146** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"><li>• Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.)</li><li>• Weight: 0.26 kg (0.57 lb)</li><li>• Maximum power consumption: 22.1 W</li></ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 8-147](#) provides the ES5D21X08T00 ordering information.

**Table 8-147** Ordering information

Card Description	Card Model	Part Number
8-port 10GBASE-T RJ45 rear interface card	ES5D21X08T00	98010736

## 8.24 S7X08000 (02312URW/02312URW-002: 8-Port 10GE SFP+ or 2-Port 25GE SFP28 Optical Interface Card (Only Ports 1 and 2 Support 25GE))

### Version Mapping

[Table 8-148](#) lists the mapping between the S7X08000 card and software versions.

**Table 8-148** Version mapping

Card Model	Part Number	Software Version
S7X08000	02312URW	S5731-H, S5731S-H, and S5732-H: V200R019C10 and later versions S5735S-H: V200R021C01 and later versions S5736-S: V200R020C10 and later versions
	02312URW-002	S5731-H and S5731S-H: V200R021C10SPC600 and later versions (If V200R021C10SPC500 is used, install V200R021HP0121 or a later patch. If V200R021C00SPC100 is used, install V200R021SPH013 or a later patch. After installing the patch, remove and insert the card again to register the card.) S5732-H: V200R021C10SPC600 and later versions (If V200R021C00SPC100 is used, install V200R021SPH013 or a later patch. After installing the patch, remove and insert the card again to register the card.) S5735S-H: V200R021C10SPC600 and later versions S5736-S: V200R021C10SPC600 and later versions (If V200R021C00SPC100 is used, install V200R021SPH013 or a later patch. After installing the patch, remove and insert the card again to register the card.) <b>NOTE</b> If this card is used on the S5731-H24HB4XZ, S5731-H48HB4XZ, S5731S-H24HB4XZ-A, S5731S-H48HB4XZ-A, or S5732-H48XUM2CC, the initial version is V200R021C10SPC600 and does not support patches with earlier versions.

## Card Overview

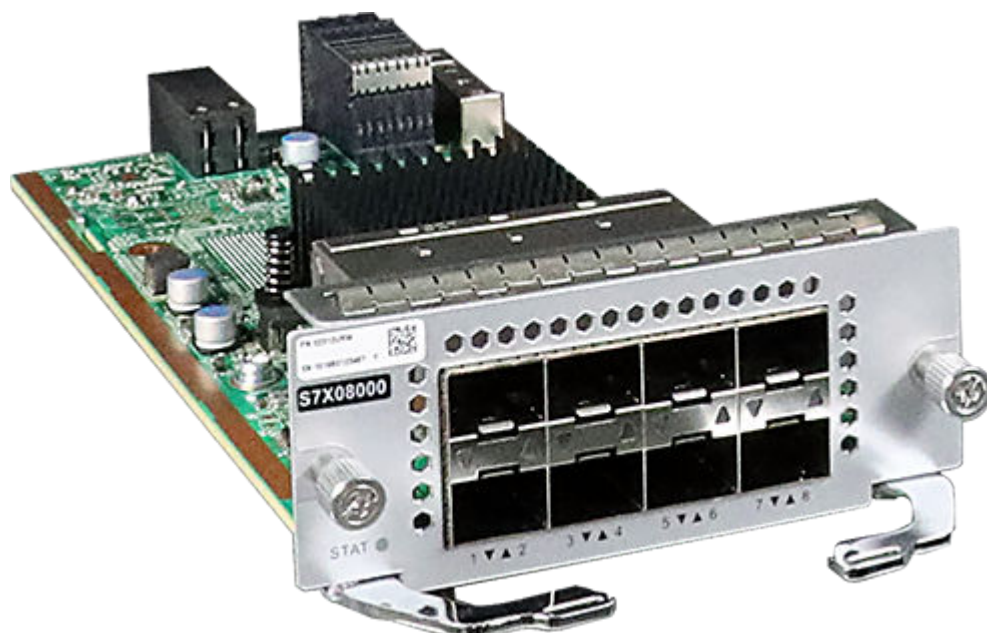
The S7X08000 provides eight 10GE SFP+ optical ports for data access and line-rate switching by default. The port mode can be changed. After the change, the first two ports are 25GE ports, and the last six ports become unavailable.

The S7X08000 can be installed in a rear card slot of the switch models listed in [Table 8-149](#).

**Table 8-149** Applicable switch models

Card	Switch Model
S7X08000	<ul style="list-style-type: none"> <li>• S5731-H24T4XC</li> <li>• S5731-H24P4XC</li> <li>• S5731-H48T4XC</li> <li>• S5731-H48P4XC</li> <li>• S5731S-H24T4XC-A</li> <li>• S5731S-H48T4XC-A</li> <li>• S5731-H24HB4XZ</li> <li>• S5731-H48HB4XZ</li> <li>• S5731S-H24HB4XZ-A</li> <li>• S5731S-H48HB4XZ-A</li> <li>• S5732-H24UM2CC</li> <li>• S5732-H48UM2CC</li> <li>• S5732-H48XUM2CC</li> <li>• S5735S-H24S4XC-A</li> <li>• S5736-S24UM4XC</li> <li>• S5736-S24S4XC</li> <li>• S5736-S48S4XC</li> </ul>

**Figure 8-75** S7X08000



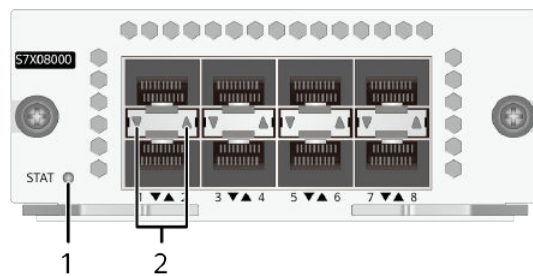
## Functions

**Table 8-150** Functions

Function	Description
Basic function	Provides eight 10GE SFP+ optical ports for data access and line-rate switching by default. You can run the <b>set card port-config-mode 25g-port enable</b> command to change the port mode. After this command is configured, the first two ports are 25GE ports and the last six ports become unavailable.
Hot swapping	Supported
Service ports for stacking	The service ports on the card can be used as stack ports.

## Indicators and Ports

**Figure 8-76** Indicators on the S7X08000

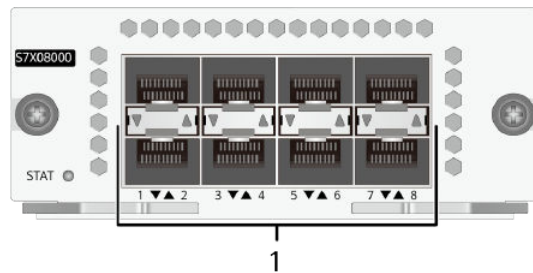


**Table 8-151** Indicator description

No.	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> <li>Fast blinking: The system is starting.</li> <li>Slow blinking: The system is running properly.</li> </ul>
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.

No.	Indicator	Color	Description
2	ACT/LINK	Green	<ul style="list-style-type: none"> <li>Steady on: A link is established on the port.</li> <li>Blinking: The port is sending or receiving data.</li> </ul>
		Off	No link is established on the port.

**Figure 8-77** Ports on the S7X08000



1. Eight 10GE SFP+ optical ports, supporting 10GE/GE

You can run the **set card port-config-mode 25g-port enable** command to change the port mode. After this command is configured, the first two ports are 25GE SFP28 optical ports, and the last six ports become unavailable.

**10GE SFP+ optical port**

The S7X08000 provides 10GE SFP+ optical ports to transmit and receive service data at 10 Gbit/s or 1 Gbit/s. [Table 8-152](#) lists the attributes of a 10GE SFP+ optical port.

**NOTE**

When the card is installed on the S5731-H, S5731S-H, and S5732-H, the 10GE SFP+ optical ports support GE optical modules, GE copper modules, 10GE SFP+ optical modules, SFP+ copper cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), AOC cables (3 m and 10 m; SFP+ to SFP+), and SFP+ dedicated stack cables (supported only on the S5732-H24UM2CC and S5732-H48UM2CC).

When the card is installed on the S5735S-H and S5736-S, the 10GE SFP+ optical ports support GE optical modules, GE copper modules, 10GE SFP+ optical modules (the maximum transmission distance cannot exceed 10 km), SFP+ copper cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), and AOC cables (3 m and 10 m; SFP+ to SFP+).

**Table 8-152** Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module. For details, see <a href="#">10.5 GE eSFP Optical Modules</a> , <a href="#">10.7 GE-CWDM eSFP Optical Modules</a> , <a href="#">10.9 GE-DWDM eSFP Optical Modules</a> , <a href="#">10.10 GE SFP Copper Modules</a> , <a href="#">10.13 10GE SFP+ Optical Modules</a> , <a href="#">10.14 10GE-CWDM SFP+ Optical Modules</a> , and <a href="#">10.15 10GE-DWDM SFP+ Optical Modules</a> .

### 25GE SFP28 optical port

The S7X08000 provides 25GE SFP28 optical ports to transmit and receive service data at 25 Gbit/s, 10 Gbit/s, or 1 Gbit/s. [Table 8-153](#) lists the attributes of a 25GE SFP28 optical port.

#### NOTE

- When the card is installed on the S5731-H, S5731S-H, and S5732-H, the 25GE SFP28 optical ports support 25GE optical modules, SFP28 copper cables (1 m, 3 m, and 5 m; SFP28 to SFP28), SFP28 AOC cables (3 m, 5 m, 7 m, and 10 m; SFP28 to SFP28), GE optical modules, GE copper modules, 10GE SFP+ optical modules, SFP+ copper cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), and AOC cables (3 m and 10 m; SFP+ to SFP+).
- When the card is installed on the S5735S-H and S5736-S, the 25GE SFP28 optical ports support 25GE optical modules, SFP28 copper cables (1 m, 3 m, and 5 m; SFP28 to SFP28), SFP28 AOC cables (3 m, 5 m, 7 m, and 10 m; SFP28 to SFP28), GE optical modules, GE copper modules, 10GE SFP+ optical modules (the maximum transmission distance cannot exceed 10 km), SFP+ copper cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), and AOC cables (3 m and 10 m; SFP+ to SFP+).
- When a 25GE optical module or cable is connected to a 25GE SFP28 optical port, the port can automatically adjust its rate to 25 Gbit/s.
- When a 10GE optical module or cable is connected to a 25GE SFP28 optical port, the port can automatically adjust its rate to 10 Gbit/s.
- Before installing a GE optical module or copper module on a 25GE SFP28 optical port, run the **port mode ge** command to configure the port to work at 1 Gbit/s.

**Table 8-153** Attributes of a 25GE SFP28 optical port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module. For details, see <a href="#">10.16 25GE SFP28 Optical Modules</a> , <a href="#">10.5 GE eSFP Optical Modules</a> , <a href="#">10.7 GE-CWDM eSFP Optical Modules</a> , <a href="#">10.9 GE-DWDM eSFP Optical Modules</a> , <a href="#">10.10 GE SFP Copper Modules</a> , <a href="#">10.13 10GE SFP+ Optical Modules</a> , <a href="#">10.14 10GE-CWDM SFP+ Optical Modules</a> , and <a href="#">10.15 10GE-DWDM SFP+ Optical Modules</a> .

## Technical Specifications

**Table 8-154** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.57 in. x 3.94 in. x 8.19 in.)</li> <li>Weight: 0.44 kg (0.97 lb)</li> <li>Maximum power consumption: 33 W</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 8-155](#) provides the S7X08000 ordering information.

**Table 8-155** Ordering information

Card Description	Card Model	Part Number
8-port 10GE SFP+ or 2-port 25GE SFP28 optical interface card (only ports 1 and 2 support 25GE)	S7X08000	02312URW 02312URW-002

## 8.25 S7Y08000 (02312URV/02312URV-002: 8-Port 25GE SFP28 Optical Interface Card)

## Version Mapping

**Table 8-156** lists the mapping between the S7Y08000 card and software versions.

**Table 8-156** Version mapping

Card Model	Part Number	Software Version
S7Y08000	02312URV	V200R019C10SPC500 and later versions
	02312URV-002	V200R021C10SPC600 and later versions (If V200R021C00SPC100 is used, install V200R021SPH013 or a later patch. After installing the patch, remove and insert the card again to register the card.)  <b>NOTE</b> If this card is used on the S5732-H48XUM2CC, the initial version is V200R021C10SPC600 and does not support patches with earlier versions.

## Card Overview

The S7Y08000 provides eight 25GE SFP28 optical ports for data access and switching by default.

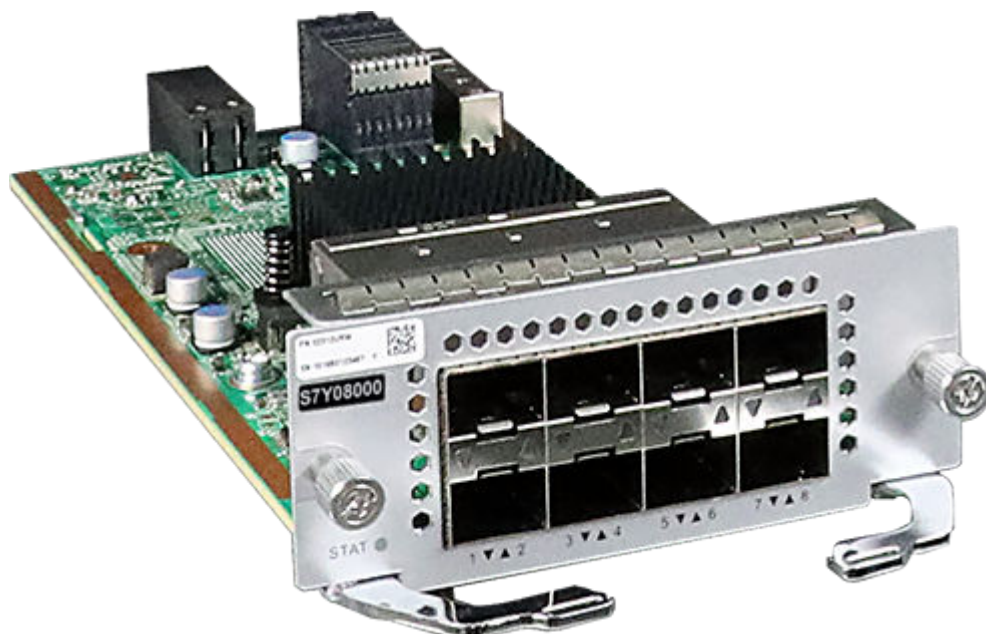
The S7Y08000 can be installed in a rear card slot of the switch models listed in **Table 8-157**.

**Table 8-157** Applicable switch models

Card	Switch Model
S7Y08000	<ul style="list-style-type: none"> <li>● S5732-H24UM2CC</li> <li>● S5732-H48UM2CC</li> <li>● S5732-H48XUM2CC</li> </ul>



**Figure 8-78** S7Y08000



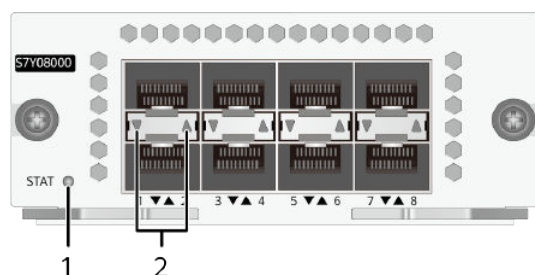
## Functions

**Table 8-158** Functions

Function	Description
Basic function	Provides eight 25GE SFP28 optical ports for data access and switching by default.
Hot swapping	Supported
Service ports for stacking	The service ports on the card can be used as stack ports.

## Indicators and Ports

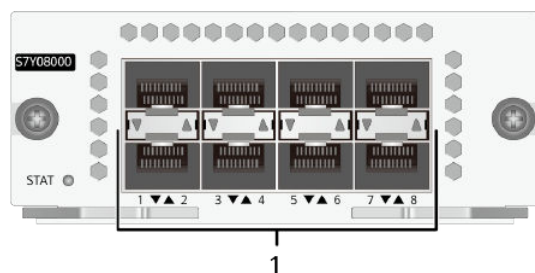
**Figure 8-79** Indicators on the S7Y08000



**Table 8-159** Indicator description

No.	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> <li>Fast blinking: The system is starting.</li> <li>Slow blinking: The system is running properly.</li> </ul>
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	ACT/LINK	Green	<ul style="list-style-type: none"> <li>Steady on: A link is established on the port.</li> <li>Blinking: The port is sending or receiving data.</li> </ul>
		Off	No link is established on the port.

**Figure 8-80** Ports on the S7Y08000



1. Eight 25GE SFP28 optical ports, supporting 25GE/10GE/GE.

### 25GE SFP28 optical port

The S7Y08000 provides 25GE SFP28 optical ports to transmit and receive service data at 25 Gbit/s, 10 Gbit/s, or 1 Gbit/s. [Table 8-160](#) lists the attributes of a 25GE SFP28 optical port.

 NOTE

- The 25GE SFP28 optical ports support 25GE optical modules, SFP28 copper cables (1 m, 3 m, and 5 m; SFP28 to SFP28), SFP28 AOC cables (3 m, 5 m, 7 m, and 10 m; SFP28 to SFP28), GE optical modules, GE copper modules, 10GE SFP+ optical modules, SFP+ copper cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), and AOC cables (3 m and 10 m; SFP+ to SFP+).
- When a 25GE optical module or cable is connected to a 25GE SFP28 optical port, the port can automatically adjust its rate to 25 Gbit/s.
- When a 10GE optical module or cable is connected to a 25GE SFP28 optical port, the port can automatically adjust its rate to 10 Gbit/s.
- Before installing a GE optical module or copper module on a 25GE SFP28 optical port, run the **port mode ge** command to configure the port to work at 1 Gbit/s.

**Table 8-160** Attributes of a 25GE SFP28 optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module. For details, see <a href="#">10.16 25GE SFP28 Optical Modules</a> , <a href="#">10.5 GE eSFP Optical Modules</a> , <a href="#">10.7 GE-CWDM eSFP Optical Modules</a> , <a href="#">10.9 GE-DWDM eSFP Optical Modules</a> , <a href="#">10.10 GE SFP Copper Modules</a> , <a href="#">10.13 10GE SFP+ Optical Modules</a> , <a href="#">10.14 10GE-CWDM SFP+ Optical Modules</a> , and <a href="#">10.15 10GE-DWDM SFP+ Optical Modules</a> .

## Technical Specifications

**Table 8-161** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>• Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.57 in. x 3.94 in. x 8.19 in.)</li> <li>• Weight: 0.44 kg (0.97 lb)</li> <li>• Maximum power consumption: 33 W</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 8-162](#) provides the S7Y08000 ordering information.

**Table 8-162** Ordering information

Card Description	Card Model	Part Number
8-port 25GE SFP28 optical interface card	S7Y08000	02312URV 02312URV-002

## 8.26 S7Q02001 (02313UBW: 2-port 40GE QSFP+ interface card)

### Overview

**Table 8-163** Basic information about the S7Q02001

Item	Details
Description	2-port 40GE QSFP+ interface card
Part Number	02313UBW
Model	S7Q02001

### Appearance

**Figure 8-81** Appearance of the S7Q02001



### Version Mapping

**Table 8-164** Mappings between S7Q02001 and product models

Product	Product Model	First Supported Version	Limitations
S5731-H	S5731-H24HB4XZ (02354QXD)	V200R021C10SPC 500	-
S5731-H	S5731-H24HB4XZ (02354QXD-001)	V200R021C10SPC 600	-
S5731-H	S5731-H24P4XC (02352QPV)	V200R021C01	-

Product	Product Model	First Supported Version	Limitations
S5731-H	S5731-H24P4XC (02352QPV-001)	V200R021C01	-
S5731-H	S5731-H24P4XC (02352QPV-003)	V200R021C10SPC 600	-
S5731-H	S5731-H24T4XC (02352QPP)	V200R021C01	-
S5731-H	S5731-H24T4XC (02352QPP-001)	V200R021C01	-
S5731-H	S5731-H24T4XC (02352QPP-005)	V200R021C10SPC 600	-
S5731-H	S5731-H48HB4XZ (02354QXB)	V200R021C10SPC 500	-
S5731-H	S5731-H48HB4XZ (02354QXB-001)	V200R021C10SPC 600	-
S5731-H	S5731-H48P4XC (02352SVD)	V200R021C01	-
S5731-H	S5731-H48P4XC (02352SVD-001)	V200R021C01	-
S5731-H	S5731-H48P4XC (02352SVD-003)	V200R021C10SPC 600	-
S5731-H	S5731-H48T4XC (02352QPT)	V200R021C01	-
S5731-H	S5731-H48T4XC (02352QPT-003)	V200R021C01	-
S5731-H	S5731-H48T4XC (02352QPT-007)	V200R021C10SPC 600	-
S5731S-H	S5731S- H24HB4XZ-A (02354QXE)	V200R021C10SPC 500	-
S5731S-H	S5731S- H24HB4XZ-A (02354QXE-001)	V200R021C10SPC 600	-
S5731S-H	S5731S-H24T4XC- A (02352YRG)	V200R021C01	-
S5731S-H	S5731S-H24T4XC- A (02352YRG-001)	V200R021C01	-

Product	Product Model	First Supported Version	Limitations
S5731S-H	S5731S-H24T4XC-A (02352YRG-003)	V200R021C10SPC 600	-
S5731S-H	S5731S-H48HB4XZ-A (02354QXC)	V200R021C10SPC 500	-
S5731S-H	S5731S-H48HB4XZ-A (02354QXC-001)	V200R021C10SPC 600	-
S5731S-H	S5731S-H48T4XC-A (02352YRF)	V200R021C01	-
S5731S-H	S5731S-H48T4XC-A (02352YRF-003)	V200R021C01	-
S5731S-H	S5731S-H48T4XC-A (02352YRF-005)	V200R021C10SPC 600	-
S5732-H	S5732-H24UM2CC (02353HUC)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353HUC-003)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-001)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-004)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-010)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-011)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-014)	V200R022C00	-

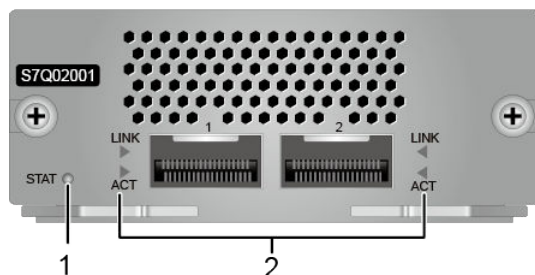
Product	Product Model	First Supported Version	Limitations
S5732-H	S5732-H24UM2CC (02353SJY-020)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-021)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-024)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353HUB)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353HUB-002)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-001)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-003)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-004)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-010)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-011)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-013)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-014)	V200R022C00	-

Product	Product Model	First Supported Version	Limitations
S5732-H	S5732-H48UM2CC (02353SJT-020)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-021)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-023)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-024)	V200R022C00	-
S5732-H	S5732-H48XUM2CC (02353MLH)	V200R022C00	-
S5732-H	S5732-H48XUM2CC (02353MLH-001)	V200R022C00	-
S5732-H	S5732-H48XUM2CC (02353MLH-002)	V200R023C10	-
S5735S-H	S5735S-H24S4XC-A (98011041)	V200R021C01	-
S5736-S	S5736-S24S4XC (98011038)	V200R021C01	-
S5736-S	S5736-S24UM4XC (98011020)	V200R021C01	-
S5736-S	S5736-S24UM4XC (98011020-001)	V200R021C01	-
S5736-S	S5736-S24UM4XC (98011020-004)	V200R021C01	-
S5736-S	S5736-S48S4XC (98011042)	V200R021C01	-



## Indicators

**Figure 8-82** Indicators on the S7Q02001



1. STAT: running status indicator	2. LINK/ACT indicators of ports
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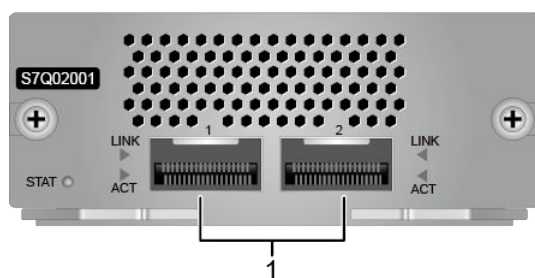
**Table 8-165** Indicators on the S7Q02001

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Off	The system software is not running.
		Green	Fast blinking	The system is starting.
		Green	Slow blinking	The system is running normally.
		Red	Steady on	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
LINK	LINK indicators of ports	-	Off	No link is established on the port.
		Green	Steady on	A link is established on the port.

Silkscreen	Name	Color	Status	Description
ACT	ACT indicators of ports	-	Off	The port is not transmitting or receiving data.
		Yellow	Blinking	The port is transmitting or receiving data.

## Ports

**Figure 8-83** Ports on the S7Q02001



1. Two 40GE QSFP+ optical ports

**Table 8-166** Ports on the S7Q02001

Port	Connector Type	Description	Available Components
40GE QSFP+ optical port	QSFP+	40GE optical ports to transmit and receive service traffic at 40 Gbit/s	<ul style="list-style-type: none"> <li>• <b>40GE QSFP+ optical modules</b></li> <li>• <b>1 m, 3 m, and 5 m QSFP+ high-speed copper cables (QSFP+ to QSFP+ or QSFP+ to 4*SFP+)</b></li> <li>• <b>10 m QSFP+ AOC cables (QSFP+ to QSFP+ or QSFP+ to 4*SFP+)</b></li> </ul>

## Functions and Features

**Table 8-167** Functions and features of the S7Q02001

Function	Description
Basic functions	Provides two 40GE QSFP+ optical ports for data access and line-rate switching. Each 40GE port can be split into four 10GE ports.
Hot swapping	Supported
Service port stacking	Ports on the card can be used as stack ports. <b>NOTE</b> A 40GE port cannot be used as a stack port after it is split into four 10GE ports.

## Technical Specifications

**Table 8-168** Technical specifications of the S7Q02001

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.)

Item	Specification
Dimensions with packaging (H x W x D) [mm(in.)]	80 mm x 160 mm x 305 mm (3.15 in. x 6.30 in. x 12.01 in.)
Weight without packaging [kg(lb)]	0.40 kg (0.88 lb)
Weight with packaging [kg(lb)]	0.6 kg (1.32 lb)
Typical power consumption [W]	24 W
Typical heat dissipation [BTU/hour]	81.89 BTU/hour
Maximum power consumption [W]	27 W
Maximum heat dissipation [BTU/hour]	92.13 BTU/hour

## 8.27 S7Q02001 (02313UBW-002: 2-port 40GE QSFP+ interface card)

### Overview

**Table 8-169** Basic information about the S7Q02001

Item	Details
Description	2-port 40GE QSFP+ interface card
Part Number	02313UBW-002
Model	S7Q02001

### Appearance

**Figure 8-84** Appearance of the S7Q02001



## Version Mapping

**Table 8-170** Mappings between S7Q02001 and product models

Product	Product Model	First Supported Version	Limitations
S5731-H	S5731-H24HB4XZ (02354QXD)	V200R021C10SPC 600	-
S5731-H	S5731-H24HB4XZ (02354QXD-001)	V200R021C10SPC 600	-
S5731-H	S5731-H24P4XC (02352QPV)	V200R021C10SPC 600	If the device is used in V200R021C10SPC 500, install V200R021HP0121 or a later patch. After installing the patch, remove and insert the card again to register the card.
S5731-H	S5731-H24P4XC (02352QPV-001)	V200R021C10SPC 600	If the device is used in V200R021C10SPC 500, install V200R021HP0121 or a later patch. After installing the patch, remove and insert the card again to register the card.
S5731-H	S5731-H24P4XC (02352QPV-003)	V200R021C10SPC 600	If the device is used in V200R021C10SPC 500, install V200R021HP0121 or a later patch. After installing the patch, remove and insert the card again to register the card.

Product	Product Model	First Supported Version	Limitations
S5731-H	S5731-H24T4XC (02352QPP)	V200R021C10SPC 600	If the device is used in V200R021C10SPC 500, install V200R021HP0121 or a later patch. After installing the patch, remove and insert the card again to register the card.
S5731-H	S5731-H24T4XC (02352QPP-001)	V200R021C10SPC 600	If the device is used in V200R021C10SPC 500, install V200R021HP0121 or a later patch. After installing the patch, remove and insert the card again to register the card.
S5731-H	S5731-H24T4XC (02352QPP-005)	V200R021C10SPC 600	If the device is used in V200R021C10SPC 500, install V200R021HP0121 or a later patch. After installing the patch, remove and insert the card again to register the card.
S5731-H	S5731-H48HB4XZ (02354QXB)	V200R021C10SPC 600	-
S5731-H	S5731-H48HB4XZ (02354QXB-001)	V200R021C10SPC 600	-

Product	Product Model	First Supported Version	Limitations
S5731-H	S5731-H48P4XC (02352SVD)	V200R021C10SPC 600	If the device is used in V200R021C10SPC 500, install V200R021HP0121 or a later patch. After installing the patch, remove and insert the card again to register the card.
S5731-H	S5731-H48P4XC (02352SVD-001)	V200R021C10SPC 600	If the device is used in V200R021C10SPC 500, install V200R021HP0121 or a later patch. After installing the patch, remove and insert the card again to register the card.
S5731-H	S5731-H48P4XC (02352SVD-003)	V200R021C10SPC 600	If the device is used in V200R021C10SPC 500, install V200R021HP0121 or a later patch. After installing the patch, remove and insert the card again to register the card.
S5731-H	S5731-H48T4XC (02352QPT)	V200R021C10SPC 600	If the device is used in V200R021C10SPC 500, install V200R021HP0121 or a later patch. After installing the patch, remove and insert the card again to register the card.

Product	Product Model	First Supported Version	Limitations
S5731-H	S5731-H48T4XC (02352QPT-003)	V200R021C10SPC 600	If the device is used in V200R021C10SPC 500, install V200R021HP0121 or a later patch. After installing the patch, remove and insert the card again to register the card.
S5731-H	S5731-H48T4XC (02352QPT-007)	V200R021C10SPC 600	If the device is used in V200R021C10SPC 500, install V200R021HP0121 or a later patch. After installing the patch, remove and insert the card again to register the card.
S5731S-H	S5731S- H24HB4XZ-A (02354QXE)	V200R021C10SPC 600	-
S5731S-H	S5731S- H24HB4XZ-A (02354QXE-001)	V200R021C10SPC 600	-
S5731S-H	S5731S-H24T4XC- A (02352YRG)	V200R021C10SPC 600	If the device is used in V200R021C10SPC 500, install V200R021HP0121 or a later patch. After installing the patch, remove and insert the card again to register the card.



Product	Product Model	First Supported Version	Limitations
S5731S-H	S5731S-H24T4XC-A (02352YRG-001)	V200R021C10SPC 600	If the device is used in V200R021C10SPC 500, install V200R021HP0121 or a later patch. After installing the patch, remove and insert the card again to register the card.
S5731S-H	S5731S-H24T4XC-A (02352YRG-003)	V200R021C10SPC 600	If the device is used in V200R021C10SPC 500, install V200R021HP0121 or a later patch. After installing the patch, remove and insert the card again to register the card.
S5731S-H	S5731S-H48HB4XZ-A (02354QXC)	V200R021C10SPC 600	-
S5731S-H	S5731S-H48HB4XZ-A (02354QXC-001)	V200R021C10SPC 600	-
S5731S-H	S5731S-H48T4XC-A (02352YRF)	V200R021C10SPC 600	If the device is used in V200R021C10SPC 500, install V200R021HP0121 or a later patch. After installing the patch, remove and insert the card again to register the card.

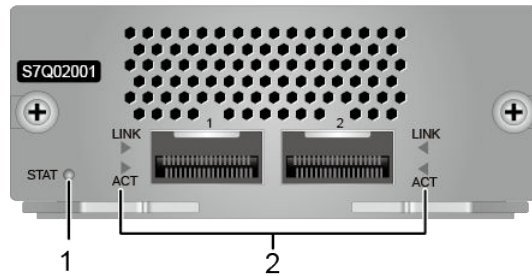
Product	Product Model	First Supported Version	Limitations
S5731S-H	S5731S-H48T4XC-A (02352YRF-003)	V200R021C10SPC 600	If the device is used in V200R021C10SPC 500, install V200R021HP0121 or a later patch. After installing the patch, remove and insert the card again to register the card.
S5731S-H	S5731S-H48T4XC-A (02352YRF-005)	V200R021C10SPC 600	If the device is used in V200R021C10SPC 500, install V200R021HP0121 or a later patch. After installing the patch, remove and insert the card again to register the card.
S5732-H	S5732-H24UM2CC (02353HUC)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353HUC-003)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-001)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-004)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-010)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-011)	V200R022C00	-

Product	Product Model	First Supported Version	Limitations
S5732-H	S5732-H24UM2CC (02353SJY-014)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-020)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-021)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-024)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353HUB)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353HUB-002)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-001)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-003)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-004)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-010)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-011)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-013)	V200R022C00	-

Product	Product Model	First Supported Version	Limitations
S5732-H	S5732-H48UM2CC (02353SJT-014)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-020)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-021)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-023)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-024)	V200R022C00	-
S5732-H	S5732-H48XUM2CC (02353MLH)	V200R022C00	-
S5732-H	S5732-H48XUM2CC (02353MLH-001)	V200R022C00	-
S5732-H	S5732-H48XUM2CC (02353MLH-002)	V200R023C10	-
S5735S-H	S5735S-H24S4XC-A (98011041)	V200R021C10SPC 600	-
S5736-S	S5736-S24S4XC (98011038)	V200R021C10SPC 600	-
S5736-S	S5736-S24UM4XC (98011020)	V200R021C10SPC 600	-
S5736-S	S5736-S24UM4XC (98011020-001)	V200R021C10SPC 600	-
S5736-S	S5736-S24UM4XC (98011020-004)	V200R021C10SPC 600	-
S5736-S	S5736-S48S4XC (98011042)	V200R021C10SPC 600	-

## Indicators

**Figure 8-85** Indicators on the S7Q02001



1. STAT: running status indicator	2. LINK/ACT indicators of ports
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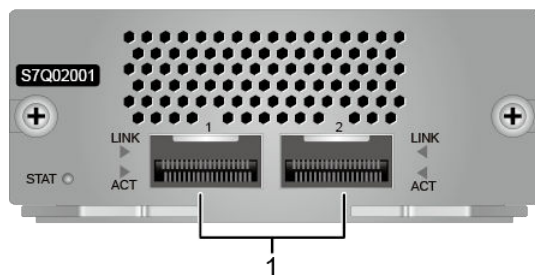
**Table 8-171** Indicators on the S7Q02001

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Off	The system software is not running.
		Green	Fast blinking	The system is starting.
		Green	Slow blinking	The system is running normally.
		Red	Steady on	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
LINK	LINK indicators of ports	-	Off	No link is established on the port.
		Green	Steady on	A link is established on the port.

Silkscreen	Name	Color	Status	Description
ACT	ACT indicators of ports	-	Off	The port is not transmitting or receiving data.
		Yellow	Blinking	The port is transmitting or receiving data.

## Ports

**Figure 8-86** Ports on the S7Q02001



1. Two 40GE QSFP+ optical ports

**Table 8-172** Ports on the S7Q02001

Port	Connector Type	Description	Available Components
40GE QSFP+ optical port	QSFP+	40GE optical ports to transmit and receive service traffic at 40 Gbit/s	<ul style="list-style-type: none"> <li>• <b>40GE QSFP+ optical modules</b></li> <li>• <b>1 m, 3 m, and 5 m QSFP+ high-speed copper cables (QSFP+ to QSFP+ or QSFP+ to 4*SFP+)</b></li> <li>• <b>10 m QSFP+ AOC cables (QSFP+ to QSFP+ or QSFP+ to 4*SFP+)</b></li> </ul>

## Functions and Features

**Table 8-173** Functions and features of the S7Q02001

Function	Description
Basic functions	Provides two 40GE QSFP+ optical ports for data access and line-rate switching. Each 40GE port can be split into four 10GE ports.
Hot swapping	Supported
Service port stacking	Ports on the card can be used as stack ports. <b>NOTE</b> A 40GE port cannot be used as a stack port after it is split into four 10GE ports.

## Technical Specifications

**Table 8-174** Technical specifications of the S7Q02001

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.)

Item	Specification
Dimensions with packaging (H x W x D) [mm(in.)]	80 mm x 160 mm x 305 mm (3.15 in. x 6.30 in. x 12.01 in.)
Weight without packaging [kg(lb)]	0.40 kg (0.88 lb)
Weight with packaging [kg(lb)]	0.6 kg (1.32 lb)
Typical power consumption [W]	24 W
Typical heat dissipation [BTU/hour]	81.89 BTU/hour
Maximum power consumption [W]	27 W
Maximum heat dissipation [BTU/hour]	92.13 BTU/hour

## 8.28 S7C02000 (2-port 100GE QSFP28 interface card)

### Overview

Table 8-175 Basic information about the S7C02000

Item	Details
Description	2-port 100GE QSFP28 interface card
Part Number	02313UBV
Model	S7C02000

### Appearance

Figure 8-87 Appearance of the S7C02000





## Version Mapping

**Table 8-176** Mappings between S7C02000 and product models

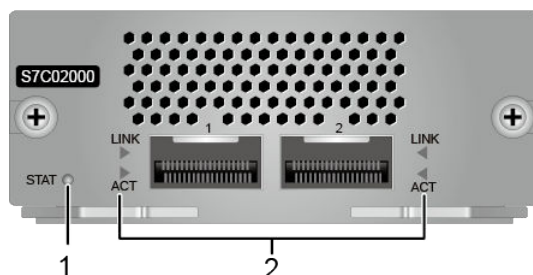
Product	Product Model	First Supported Version	Limitations
S5732-H	S5732-H24UM2CC (02353HUC)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353HUC-003)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-001)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-004)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-010)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-011)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-014)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-020)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-021)	V200R022C00	-
S5732-H	S5732-H24UM2CC (02353SJY-024)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353HUB)	V200R022C00	-

Product	Product Model	First Supported Version	Limitations
S5732-H	S5732-H48UM2CC (02353HUB-002)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-001)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-003)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-004)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-010)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-011)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-013)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-014)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-020)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-021)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-023)	V200R022C00	-
S5732-H	S5732-H48UM2CC (02353SJT-024)	V200R022C00	-

Product	Product Model	First Supported Version	Limitations
S5732-H	S5732-H48XUM2CC (02353MLH)	V200R022C00	-
S5732-H	S5732-H48XUM2CC (02353MLH-001)	V200R022C00	-
S5732-H	S5732-H48XUM2CC (02353MLH-002)	V200R023C10	-

## Indicators

**Figure 8-88** Indicators on the S7C02000



1. STAT: running status indicator	2. LINK/ACT indicators of ports
-----------------------------------	---------------------------------

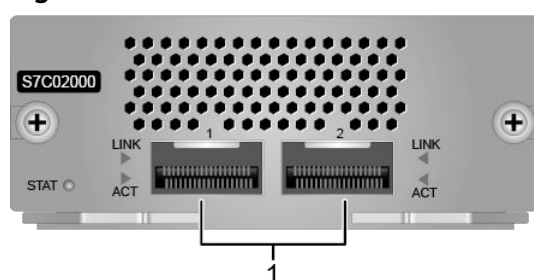
**Table 8-177** Indicators on the S7C02000

Silkscreen	Name	Color	Status	Description
STAT	Running status indicator	-	Off	The system software is not running.
		Green	Fast blinking	The system is starting.
		Green	Slow blinking	The system is running normally.

Silkscreen	Name	Color	Status	Description
		Red	Steady on	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
LINK	LINK indicators of ports	-	Off	No link is established on the port.
		Green	Steady on	A link is established on the port.
ACT	ACT indicators of ports	-	Off	The port is not transmitting or receiving data.
		Yellow	Blinking	The port is transmitting or receiving data.

## Ports

**Figure 8-89** Ports on the S7C02000



1. Two 40GE/100GE QSFP28 optical ports

**Table 8-178** Ports on the S7C02000

Port	Connector Type	Description	Available Components
100GE QSFP28 optical port	QSFP28	100GE optical ports to transmit and receive service traffic at 40 Gbit/s or 100 Gbit/s.	<ul style="list-style-type: none"> <li>• <b>100GE QSFP28 optical modules</b></li> <li>• <b>1 m, 3 m, and 5 m QSFP28 to QSFP28 high-speed copper cable</b></li> <li>• <b>10 m QSFP28 to QSFP28 AOC cable</b></li> <li>• <b>2 m QSFP28 dedicated stack cable</b></li> <li>• <b>40GE QSFP+ optical modules</b></li> <li>• <b>1 m, 3 m, and 5 m QSFP+ high-speed copper cables (QSFP+ to QSFP+ or QSFP+ to 4*SFP+)</b></li> <li>• <b>10 m QSFP+ AOC cables (QSFP+ to QSFP+ or QSFP+ to 4*SFP+)</b></li> </ul>

## Functions and Features

**Table 8-179** Functions and features of the S7C02000

Function	Description
Basic functions	Provides two 40GE/100GE QSFP28 optical ports for data access and line-rate switching. Each 40GE/100GE port can be split into four 10GE ports or four 25GE ports.

Function	Description
Hot swapping	Supported
Service port stacking	Ports on the card can be used as stack ports. <b>NOTE</b> A 40GE/100GE port cannot be used as a stack port after it is split into four 10GE ports or four 25GE ports.

## Technical Specifications

**Table 8-180** Technical specifications of the S7C02000

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	80 mm x 160 mm x 305 mm (3.15 in. x 6.30 in. x 12.01 in.)
Weight without packaging [kg(lb)]	0.40 kg (0.88 lb)
Weight with packaging [kg(lb)]	0.6 kg (1.32 lb)
Typical power consumption [W]	25 W
Typical heat dissipation [BTU/hour]	85.3 BTU/hour
Maximum power consumption [W]	28 W
Maximum heat dissipation [BTU/hour]	95.54 BTU/hour

## 8.29 ES5D21VST000 (Dedicated Stack Card with 2\*QSFP + Interface)

### Version Mapping

**Table 8-181** lists the mapping between the ES5D21VST000 card and software versions.

**Table 8-181** Version mapping

Card Model	Software Version
ES5D21VST000	S5720-C-EI and S5720-PC-EI: V200R007C00 to V200R019C10 versions <b>NOTE</b> This module is not supported in V200R007C10. S5730-SI and S5730S-EI: V200R012C00 to V200R019C10 versions

## Card Overview

The ES5D21VST000 is a stack card that provides two QSFP+ optical ports for stack connection. It can be installed in a rear card slot of the switch models listed in [Table 8-182](#).

**Table 8-182** Applicable switch models

Card	Switch Model
ES5D21VST000	S5720-C-EI, S5720-PC-EI, S5730-SI, and S5730S-EI series

**Figure 8-90** ES5D21VST000



## Functions

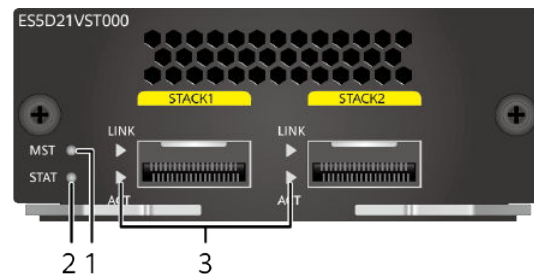
[Table 8-183](#) describes functions of the ES5D21VST000.

**Table 8-183** Functions

Function	Description
Basic function	Provides two QSFP+ optical ports for setting up a stack system among multiple switches. The QSFP+ optical port cannot be split into four 10GE ports.
Hot swapping	Supported

## Indicators and Ports

**Figure 8-91** Indicators on the ES5D21VST000



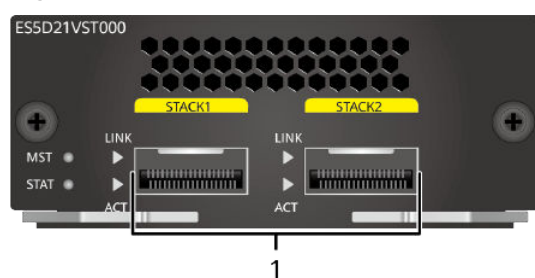
**Table 8-184** Description of indicators on the ES5D21VST000

Number	Indicator	Color	Description
1	MST	Off	Off: The switch is the standby or slave switch in a stack or a standalone switch with the stacking function disabled.
		Green	Blinking: The switch is the master switch in a stack or a standalone switch with the stacking function enabled.
2	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> <li>Fast blinking: The system is starting.</li> <li>Slow blinking: The system is running properly.</li> </ul>
		Red	Steady on: A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.



Number	Indicator	Color	Description
3	LINK	Off	No link is established on the port.
		Green	Steady on: A link is established on the port.
	ACT	Off	The port is not transmitting or receiving data.
		Yellow	Blinking: The port is transmitting or receiving data.

**Figure 8-92** Ports on the ES5D21VST000



1. Two QSFPP+ optical ports

### QSFPP+ optical ports

QSFPP+ optical ports on the ES5D21VST000 are used for setting up a stack system among multiple switches. [Table 8-185](#) lists the attributes of a QSFPP+ optical port.

#### NOTE

When the card is installed on the S5720-EI, the two optical ports on the card can work with QSFPP+ optical modules (only QSFPP-40G-SR4 and QSFPP-40G-iSR4 supported) and QSFPP+ cables (1 m, 3 m, and 5 m; QSFPP+ to QSFPP+). When the card is installed on the S5730-SI or S5730S-EI, the optical ports on the card can work with QSFPP+ optical modules (excluding the QSFPP-40G-SR-BD), QSFPP+ AOC cables (10 m; QSFPP+ to QSFPP+), and QSFPP+ cables (1 m, 3 m, and 5 m; QSFPP+ to QSFPP+).

**Table 8-185** Attributes of a QSFPP+ optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used (see <a href="#">10.17 40GE QSFPP+ Optical Modules</a> )

Attribute	Description
Standards compliance	IEEE 802.3ba

## Technical Specifications

**Table 8-186** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>• Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.)</li> <li>• Weight: 0.92 kg (2.03 lb)</li> <li>• Maximum power consumption: 9 W</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

**Table 8-187** Ordering information

Card Description	Card Name	Part Number
Dedicated stack card with 2*QSFP+ interface (including one PCS of 1 m QSFP+ cable)	ES5D21VST000	02310YXY

## 8.30 ES5D00ETPC00 (Stack Rear Card)

### Version Mapping

**Table 8-188** lists the mapping between the ES5D00ETPC00 card and software versions.

**Table 8-188** Version mapping

Card Model	Software Version
ES5D00ETPC00 <b>NOTE</b> After the <b>display device</b> command is executed, the PCB model of the card is displayed as CX22ETPC.	V100R005C01 to V200R005C03 <b>NOTE</b> This module is not supported in V200R003C02 or V200R003C10.

## Card Overview

Intelligent Stack (iStack) technology enables multiple stacking-capable devices to function as a logical device.

Before a stack is set up, each switch is an independent entity that has its own IP address and MAC address. You need to manage the switches separately. After a stack is set up, switches in the stack form a logical entity that can be managed and maintained using a single IP address. Stack technology improves forwarding performance and network reliability, and simplifies network management.

Switches can be connected as a stack using service ports or stack cards (ES5D00ETPC00).

The ES5D00ETPC00 stack card can be installed in a rear card slot of the switch models listed in [Table 8-189](#).

**Table 8-189** Applicable switch models

Card	Switch Model
ES5D00ETPC00	<ul style="list-style-type: none"> <li>• S5700-24TP-SI-AC</li> <li>• S5700-24TP-SI-DC</li> <li>• S5700-48TP-SI-AC</li> <li>• S5700-48TP-SI-DC</li> <li>• S5700-24TP-PWR-SI</li> <li>• S5700-48TP-PWR-SI</li> <li>• S5700-28C-SI</li> <li>• S5700-52C-SI</li> <li>• S5700-28C-PWR-SI</li> <li>• S5700-52C-PWR-SI</li> <li>• S5700-28C-EI</li> <li>• S5700-52C-EI</li> <li>• S5700-28C-EI-24S</li> <li>• S5700-28C-PWR-EI</li> <li>• S5700-52C-PWR-EI</li> <li>• S5710-28C-LI</li> <li>• S5710-52C-LI</li> <li>• S5710-28C-PWR-LI</li> <li>• S5710-52C-PWR-LI</li> </ul>

**Figure 8-93** shows the appearance of the ES5D00ETPC00.

**Figure 8-93** ES5D00ETPC00



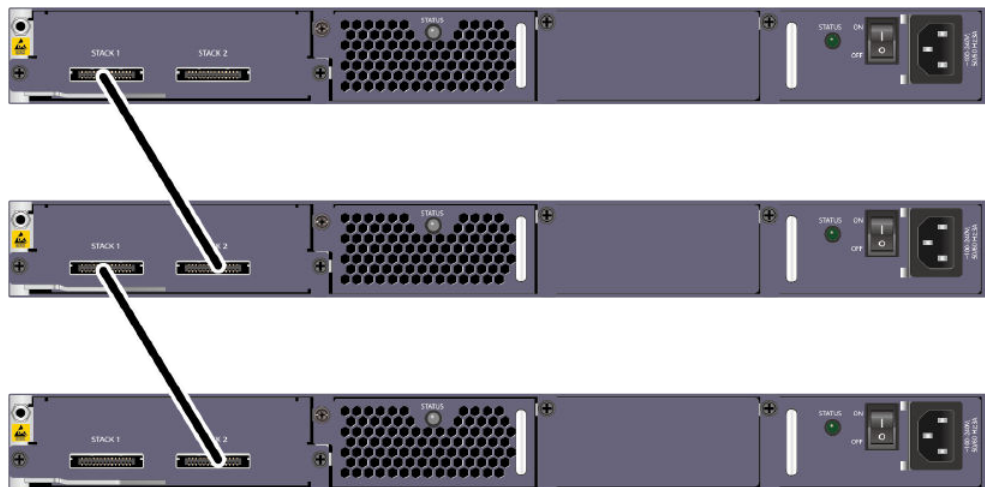
## Functions

**Table 8-190** describes functions of the ES5D00ETPC00.

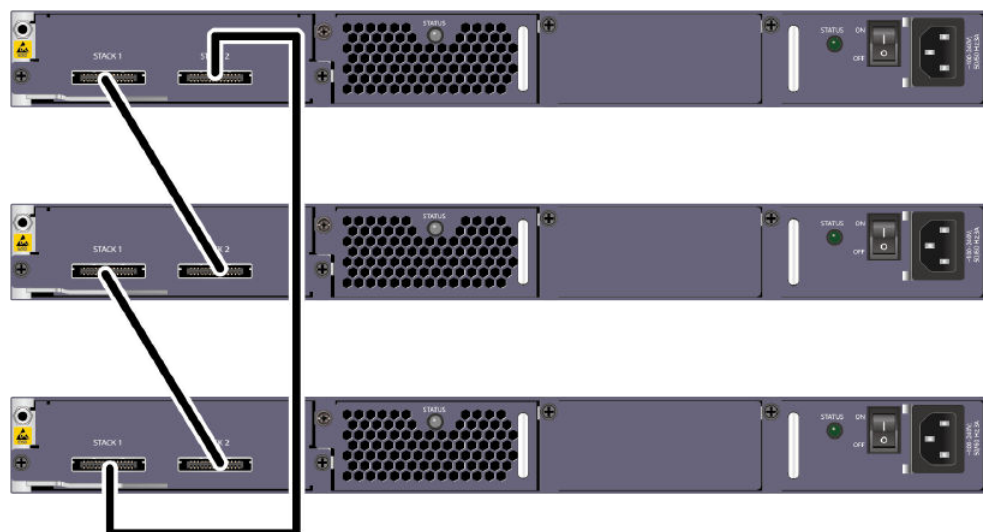
**Table 8-190** Functions

Function	Description
Basic function	Provides two 12 Gbit/s electrical ports for stacking. The 12 Gbit/s electrical ports on multiple switches are connected using PCIe cables to set up a stack.
Topology	<p>Switches in a stack can be connected in a chain or ring topology. A link failure in the chain topology causes the stack to split. In contrast, the ring topology changes into a chain topology upon a link failure so that services in the stack are not affected. Therefore, the ring topology is more reliable than the chain topology. <a href="#">Figure 8-94</a> and <a href="#">Figure 8-95</a> show the chain and ring topologies.</p> <p><b>NOTE</b>                      When connecting stack cables, connect stack1 port of one switch to stack2 port of another switch.</p>

**Figure 8-94** Chain topology of a stack



**Figure 8-95** Ring topology of a stack



## Usage Constraints

### NOTICE

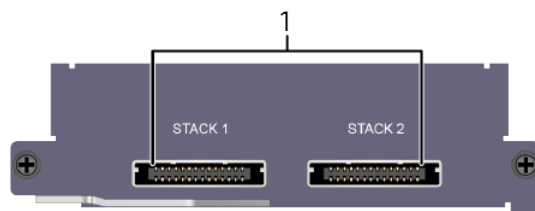
The following requirements must be met to set up a stack:

- All the member switches belong to the same series. The EI series and SI series cannot form a stack.
- All switches have stack cards installed and are connected using PCIe cables.
- The ES5D00ETPC00 is not hot swappable, but PCIe cables are hot swappable.

## Port Description

**Figure 8-96** shows ports on the ES5D00ETPC00.

**Figure 8-96** Ports on the ES5D00ETPC00



1. Two stack electrical ports

### Stack electrical port

The ES5D00ETPC00 provides two 12 Gbit/s electrical ports for stacking. The two 12 Gbit/s electrical ports must be used with [9.2 PCIe Cables](#). [Table 8-191](#) describes attributes of the 12 Gbit/s electrical port.

**Table 8-191** Attributes of a stack electrical port

Attribute	Description
Connector type	PCIe
Standards compliance	IEEE 802.3ae
Frame format	Ethernet_II, Ethernet_SAP, Ethernet_SNAP
Network protocol	IP

## Technical Specifications

[Table 8-192](#) lists technical specifications of the ES5D00ETPC00.

**Table 8-192** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>Dimensions (H x W x D): 43 mm x 143 mm x 126 mm (1.69 in. x 5.63 in. x 4.96 in.)</li> <li>Weight: 0.2 kg (0.44 lb)</li> <li>Maximum power consumption: 0.5 W</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 8-193](#) provides the card ordering information.

**Table 8-193** Ordering information

Card Description	Card Name	Part Number
Ethernet Stack Interface Card (Including Stack Card, 100 cm Stack Cable)	ES5D001VST00	02319959
Ethernet Stack Interface Card (Including Stack Card, 300 cm Stack Cable)	ES5D2VS02000	02310QPL

## 8.31 ES5D00ETPB00 (Extended Rear Card)

### Version Mapping

**Table 8-194** lists the mapping between the ES5D00ETPB00 card and software versions.

**Table 8-194** Version mapping

Card Model	Software Version
ES5D00ETPB00 <b>NOTE</b> After the <b>display device</b> command is executed, the PCB model of the card is displayed as CX22ETPB.	V100R005C01 to V200R005C03 <b>NOTE</b> This module is not supported in V200R003C02 or V200R003C10.

### Card Overview

The ES5D00ETPB00 can be installed in a rear card slot of the switch models listed in **Table 8-195**.

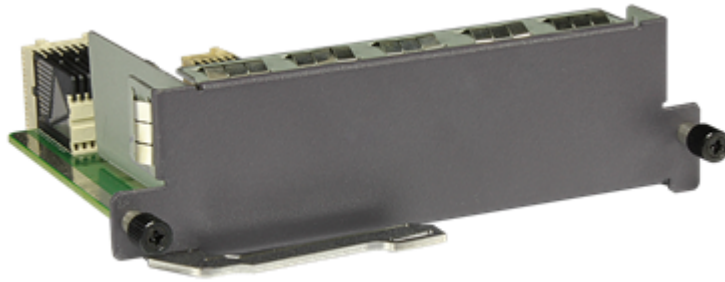
**Table 8-195** Applicable switch models

Card	Switch Model
ES5D00ETPB00	<ul style="list-style-type: none"> <li>• S5700-28C-SI</li> <li>• S5700-52C-SI</li> <li>• S5700-28C-PWR-SI</li> <li>• S5700-52C-PWR-SI</li> <li>• S5700-28C-EI</li> <li>• S5700-52C-EI</li> <li>• S5700-28C-EI-24S</li> <li>• S5700-28C-PWR-EI</li> <li>• S5700-52C-PWR-EI</li> <li>• S5710-28C-LI</li> <li>• S5710-52C-LI</li> <li>• S5710-28C-PWR-LI</li> <li>• S5710-52C-PWR-LI</li> </ul>

**Figure 8-97** shows the appearance of the ES5D00ETPB00.



**Figure 8-97** ES5D00ETPB00



## Functions

**Table 8-196** describes functions of the ES5D00ETPB00.

**Table 8-196** Functions

Function	Description
Basic function	The ES5D00ETPB00 extended rear card must be used together with the ES5D000X4S01/ES5D000G4S01/ES5D00G4SA01 front card to provide four GE SFP ports or four 10GE SFP+ ports.

## Usage Constraints

### NOTICE

An ES5D000X4S01/ES5D000G4S01/ES5D00G4SA01 front card must be used with an ES5D00ETPB00 rear card.

The ES5D00ETPB00 is not hot swappable.

## Technical Specifications

**Table 8-197** lists technical specifications of the ES5D00ETPB00.

**Table 8-197** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>• Dimensions (H x W x D): 43 mm x 143 mm x 126 mm (1.69 in. x 5.63 in. x 4.96 in.)</li> <li>• Weight: 0.2 kg (0.44 lb)</li> <li>• Maximum power consumption: 0.1 W</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

**Table 8-198** provides the ES5D00ETPB00 ordering information.

**Table 8-198** Ordering information

Card Description	Card Name	Part Number
Extended channel card	ES5D00ETPB00	03020MLA

# 9 Cables

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- 9.1 Ground Cable
- 9.2 PCIe Cables
- 9.3 Optical Fiber
- 9.4 Ethernet Cable
- 9.5 DC Power Cable (with OT and Cord End Terminals)
- 9.6 DC Power Cable (with Quick-Connect and Cord End Terminals)
- 9.7 2-Pin DC Power Cable (Phoenix Connector)
- 9.8 AC Power Cable
- 9.9 3-Pin AC Power Cable (Phoenix Connector)
- 9.10 Monitoring Port Cable (Phoenix Connector)
- 9.11 RPS1800 Power Cable
- 9.12 RPS Cable
- 9.13 Console Cable
- 9.14 Dedicated Stack Cable
- 9.15 Copper Cable
- 9.16 Lead-Acid Battery Temperature Sensor
- 9.17 First-Generation Hybrid Cable
- 9.18 Second-Generation Hybrid Cable

## 9.1 Ground Cable

### Appearance and Structure

**Figure 9-1** shows the appearance of a typical ground cable.

**NOTE**

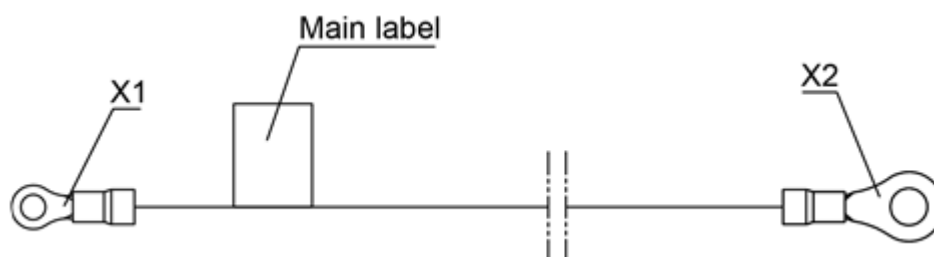
Other types of ground cables are similar to the example shown in the figure, except for their cross-sectional area, size of the cable lugs, and cable length.

**Figure 9-1** Appearance of a ground cable



**Figure 9-2** shows the structure of a ground cable.

**Figure 9-2** Structure of a ground cable



## Pin Assignments

**Table 9-1** lists the pin assignments of a ground cable.

**Table 9-1** Pin assignments of a ground cable

X1	X2	Wire Color	Conductor Cross-Sectional Area	Length
OT-4	OT-6	Green-yellow	4 mm <sup>2</sup>	0.4 m

## Connection

A ground cable grounds a device to protect it from lightning and electromagnetic interference. A ground cable is connected to a chassis in the following way:

- The OT-4 naked crimping connector connects to the ground point on the chassis.
- The OT-6 naked crimping connector connects to the ground point on the cabinet.

## 9.2 PCIe Cables

### Appearance and Structure

The S5700 series switches can use PCIe cables as stack cables to connect stack ports on rear stack cards. Switches connected using stack cables form a logical switch to forward packets.

**Figure 9-3** shows the appearance of a PCIe cable.

**Figure 9-3** PCIe cable



#### NOTE

Both ends of a PCIe cable must be covered by an ESD cap.

## Specifications

**Table 9-2** Specifications of a PCIe cable

Attribute	Description	
Cable model	1 m PCIe cable	3 m PCIe cable <b>NOTE</b> This cable is available in V200R002C00 and later versions.
Connector type	PCIe	
Standards compliance	PCIe 8X	
Length	1.0 m	3.0 m
Applicable device models	<ul style="list-style-type: none"> <li>• S5700-SI</li> <li>• S5700-EI</li> <li>• S5710-C-LI</li> </ul>	<ul style="list-style-type: none"> <li>• V200R002C00: S5700-52C-EI and S5700-28C-EI-24S</li> <li>• V200R003C00 and later versions:                             <ul style="list-style-type: none"> <li>– S5700-SI</li> <li>– S5700-EI</li> </ul> </li> </ul>

## 9.3 Optical Fiber

### AOC

An active optical cable (AOC) is a fixed-length optical fiber with optical modules at both ends. It can be directly connected to an optical port on a device. In short-distance connection scenarios, AOCs can replace optical modules and optical fibers.

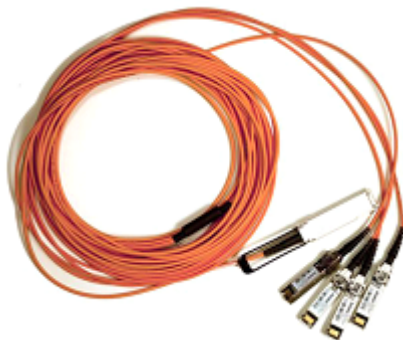
**Figure 9-4** SFP+ to SFP+ or SFP28 to SFP28 AOC



**Figure 9-5** QSFP+ to QSFP+ or QSFP28 to QSFP28 AOC



**Figure 9-6** QSFP+ to 4\*SFP+ AOC



**Table 9-3** lists the models and attributes of AOCs.

**Table 9-3** Attributes of AOCs

Model	Length	Bend Radius	Connector Type	Part Number	Operating Temperature
SFP-10G-AOC3M	3 m	30 mm	SFP+ to SFP+	02310QWG	0°C to 70°C
SFP-10G-AOC10M	10 m	30 mm	SFP+ to SFP+	02310QWH	0°C to 70°C
QSFP-H40G-AOC10M	10 m	25 mm	QSFP+ to QSFP+	02310SSH	0°C to 70°C
QSFP-4SFP10-AOC10M	10 m	25 mm	QSFP+ to 4*SFP+	02310SSJ	0°C to 70°C
QSFP-100G-AOC-10M	10 m	25 mm	QSFP28 to QSFP28	02311KNQ	0°C to 70°C
SFP-25G-AOC-3M	3 m	30 mm	SFP28 to SFP28	02311MPE	0°C to 70°C
SFP-25G-AOC-5M	5 m	30 mm	SFP28 to SFP28	02311MPD	0°C to 70°C
SFP-25G-AOC-7M	7 m	30 mm	SFP28 to SFP28	02311MPC	0°C to 70°C
SFP-25G-AOC-10M	10 m	30 mm	SFP28 to SFP28	02311KNT	0°C to 70°C
SFP-25G-AOC-3M-A	3 m	30 mm	SFP28 to SFP28	02314QWG	0°C to 70°C
SFP-25G-AOC-5M-A	5 m	30 mm	SFP28 to SFP28	02311YJH	0°C to 70°C
SFP-25G-AOC-7M-A	7 m	30 mm	SFP28 to SFP28	02311YJK	0°C to 70°C
SFP-25G-AOC-10M-A	10 m	30 mm	SFP28 to SFP28	02311YJM	0°C to 70°C

## Fiber Jumper

A fiber jumper consists of one or more optical fibers of a certain length and the optical connectors at both ends. A fiber jumper connects an optical module to a fiber terminal box.



 NOTE

- The MPO-MPO and MPO-2\*MPO fibers have similar appearances except for the number of MPO connectors at the other end (1 and 2, respectively). The following figures show an MPO-MPO fiber for example.
- The MPO-4\*DLC and MPO-10\*DLC fibers have similar appearances except for the number of DLC connectors at the other end (4 pairs and 10 pairs, respectively).
- The MPO-MPO fibers for S series devices use type B connectors (key Up/key Up).

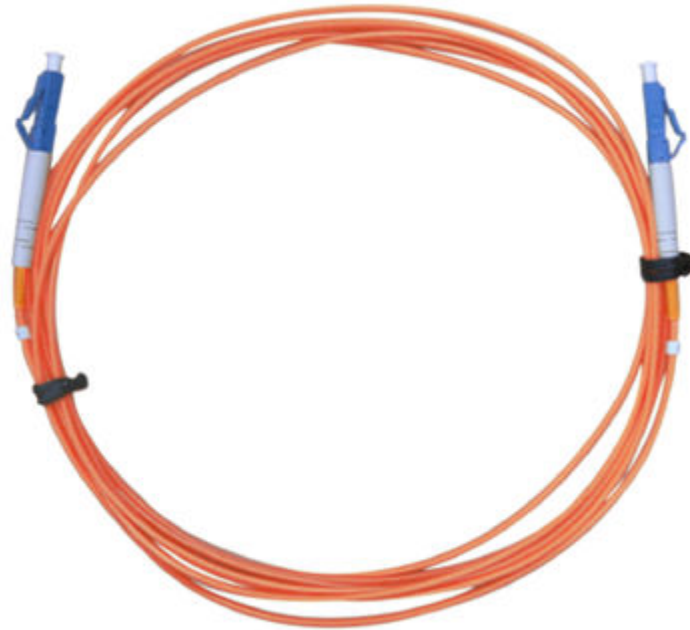
**Figure 9-7** shows a single-mode LC/PC fiber jumper.

**Figure 9-7** Single-mode LC/PC fiber jumper



**Figure 9-8** shows a multimode LC/PC fiber jumper.

**Figure 9-8** Multimode LC/PC fiber jumper



**Figure 9-9** shows a single-mode SC/PC fiber jumper.

**Figure 9-9** Single-mode SC/PC fiber jumper



**Figure 9-10** shows an MPO-MPO fiber jumper.

**Figure 9-10** MPO-MPO fiber jumper



**Figure 9-11** shows an MPO-4\*DLC fiber jumper.

**Figure 9-11** MPO-4\*DLC fiber jumper



**Figure 9-12** shows an MPO-10\*DLC fiber jumper.

**Figure 9-12** MPO-10\*DLC fiber jumper

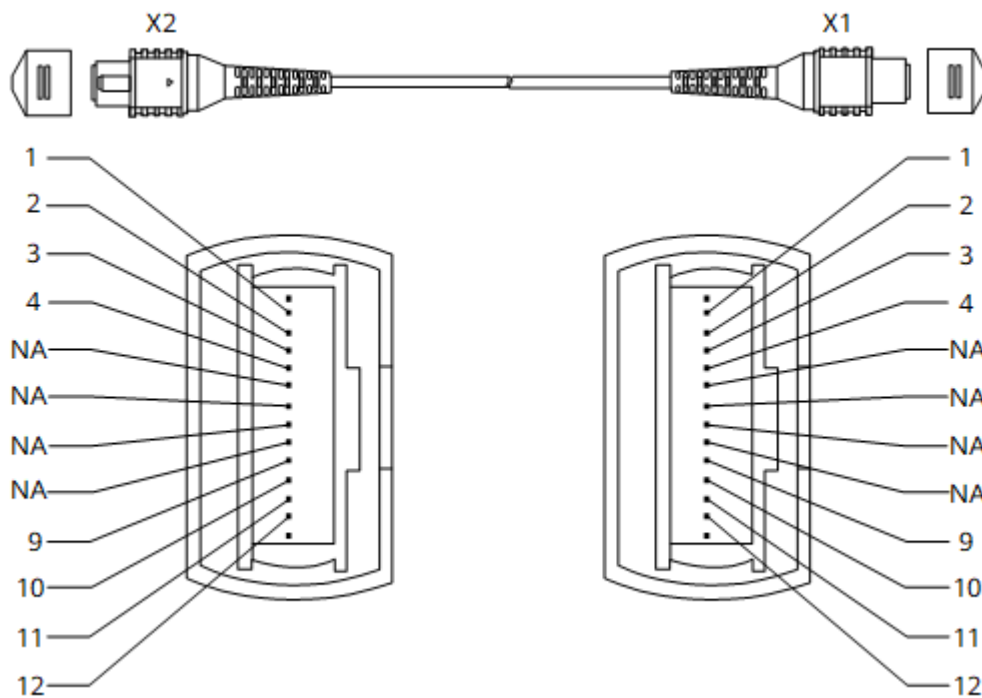


Comply with the following rules when selecting fiber jumpers:

1. Determine the length of fiber jumpers based on the onsite cabling distance.
2. Determine the fiber type based on the optical module type.
  - Use a multimode fiber jumper for a multimode optical module.
  - Use a single-mode fiber jumper for a single-mode optical module.
3. Determine the optical connector type based on the interface type.  
Ensure that the optical connector at each end of a fiber jumper is the same type as the interface to which it will be connected.

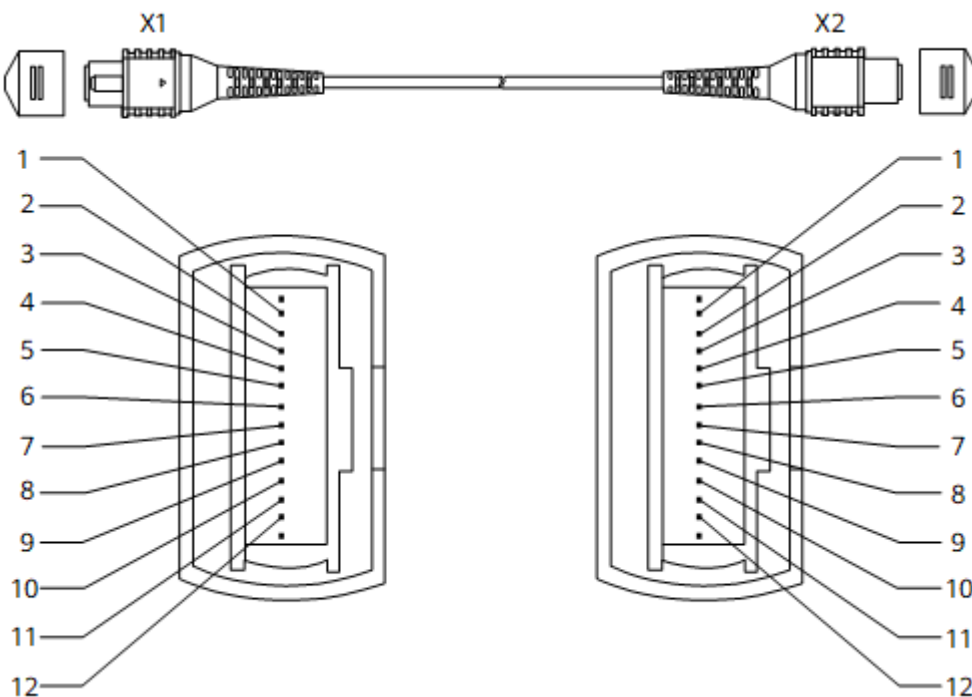
**Figure 9-13** shows the structure of an 8-strand MPO-MPO fiber jumper.

**Figure 9-13** Structure of an 8-strand MPO-MPO fiber jumper



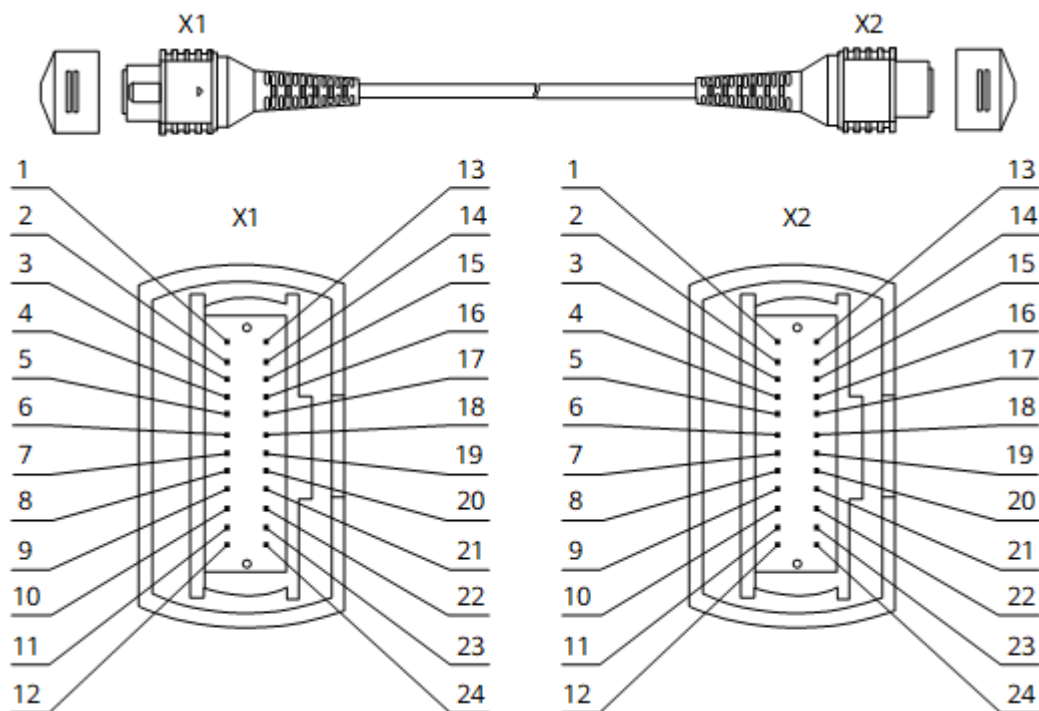
**Figure 9-14** shows the structure of a 12-strand MPO-MPO fiber jumper.

**Figure 9-14** Structure of a 12-strand MPO-MPO fiber jumper



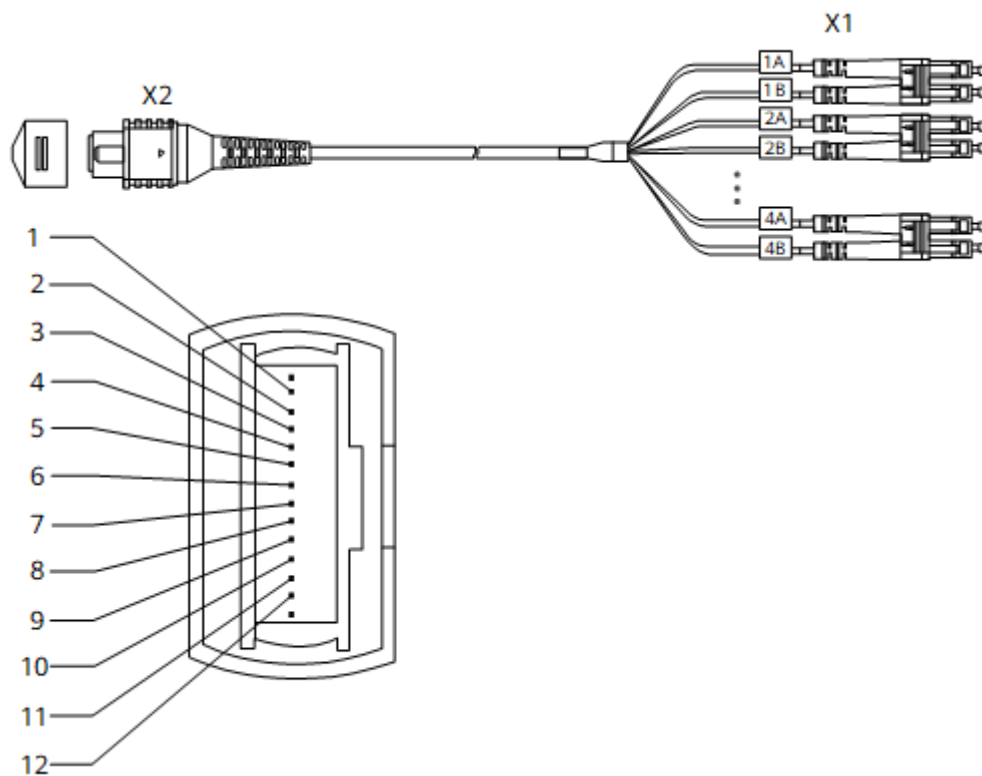
**Figure 9-15** shows the structure of a 24-strand MPO-MPO fiber jumper.

**Figure 9-15** Structure of a 24-strand MPO-MPO fiber jumper



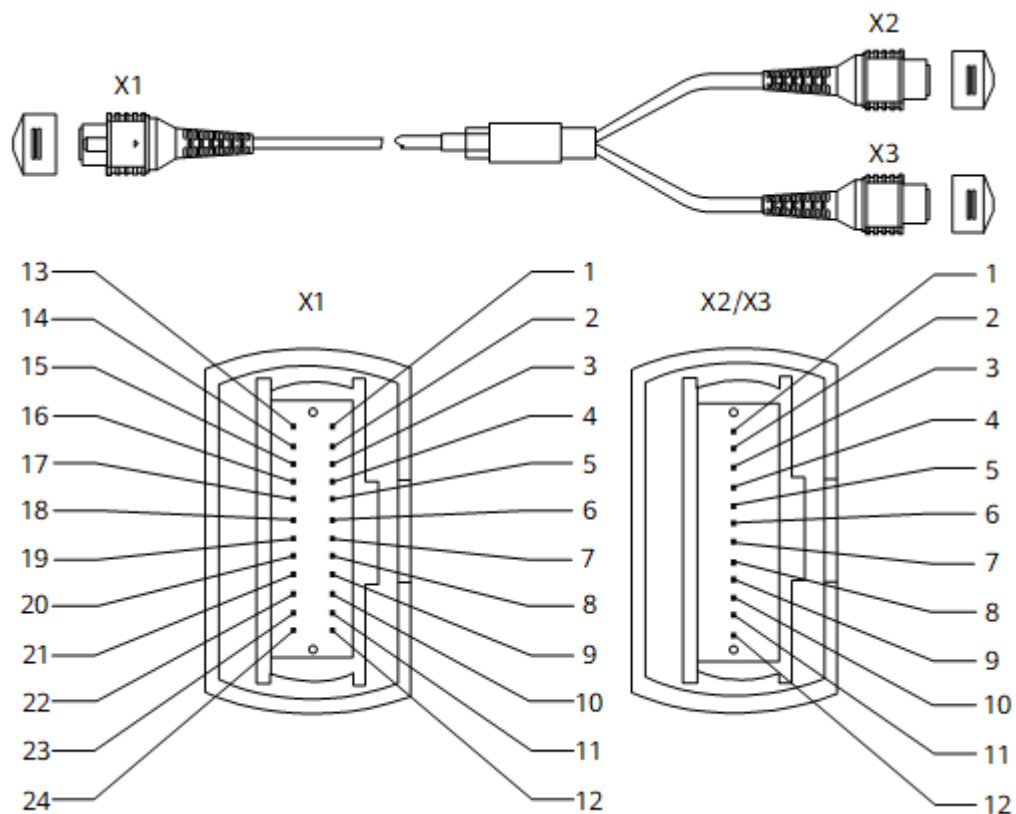
**Figure 9-16** shows the structure of an MPO-4\*DLC fiber jumper.

**Figure 9-16** Structure of an MPO-4\*DLC fiber jumper



**Figure 9-17** shows the structure of an MPO-2\*MPO fiber jumper.

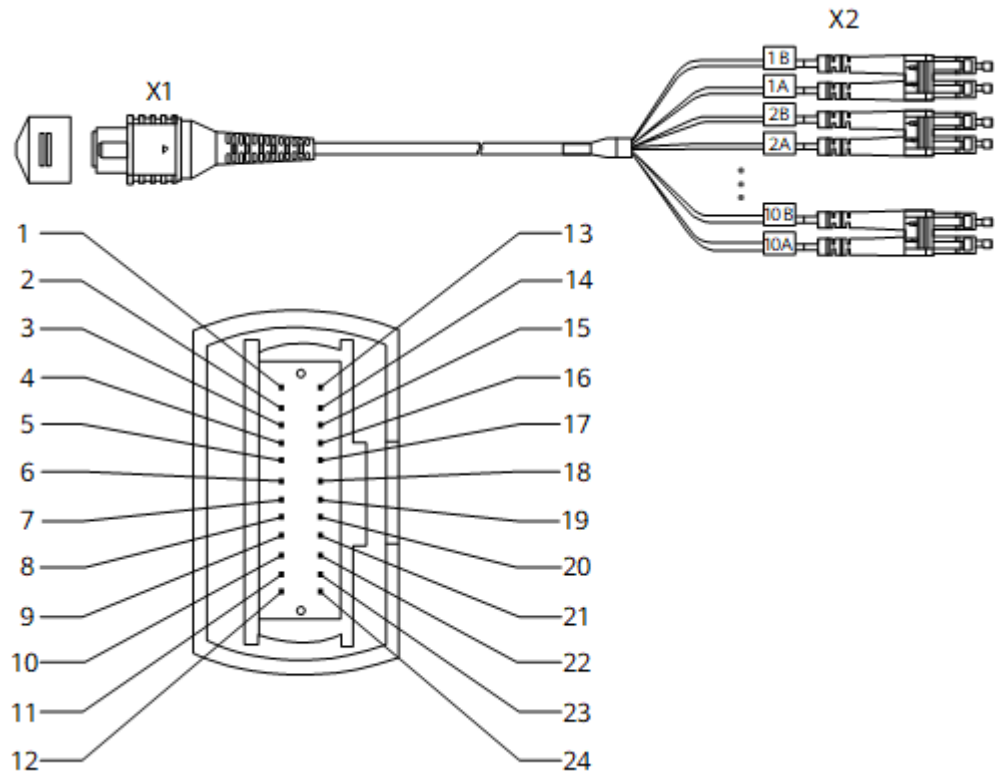
**Figure 9-17** Structure of an MPO-2\*MPO fiber jumper



**Figure 9-18** shows the structure of an MPO-10\*DLC fiber jumper.



**Figure 9-18** Structure of an MPO-10\*DLC fiber jumper



**Table 9-4** lists the pin assignments of an 8-strand MPO-MPO fiber jumper.

**Table 9-4** Pin assignments of an 8-strand MPO-MPO fiber jumper

X1 Pin	X2 Pin
1	12
2	11
3	10
4	9
NA	NA
NA	NA
NA	NA
NA	NA
9	4
10	3
11	2

X1 Pin	X2 Pin
12	1

**Table 9-5** lists the pin assignments of a 12-strand MPO-MPO fiber jumper.

**Table 9-5** Pin assignments of a 12-strand MPO-MPO fiber jumper

X1 Pin	X2 Pin
1	12
2	11
3	10
4	9
5	8
6	7
7	6
8	5
9	4
10	3
11	2
12	1

**Table 9-6** lists the pin assignments of a 24-strand MPO-MPO fiber jumper.

**Table 9-6** Pin assignments of a 24-strand MPO-MPO fiber jumper

X1 Pin	X2 Pin	X1 Pin	X2 Pin
1	24	13	12
2	23	14	11
3	22	15	10
4	21	16	9
5	20	17	8
6	19	18	7
7	18	19	6

X1 Pin	X2 Pin	X1 Pin	X2 Pin
8	17	20	5
9	16	21	4
10	15	22	3
11	14	23	2
12	13	24	1

**Table 9-7** lists the pin assignments of an MPO-4\*DLC fiber jumper.

**Table 9-7** Pin assignments of an MPO-4\*DLC fiber jumper

X2 Pin	X1 Pin
1	1A
2	2A
3	3A
4	4A
9	4B
10	3B
11	2B
12	1B

**Table 9-8** lists the pin assignments of an MPO-2\*MPO fiber jumper.

**Table 9-8** Pin assignments of an MPO-2\*MPO fiber jumper

X1 Pin	X2 Pin	X3 Pin
2	12	NA
3	11	NA
4	10	NA
5	9	NA
7	NA	12
8	NA	11
9	NA	10

X1 Pin	X2 Pin	X3 Pin
10	NA	9
14	1	NA
15	2	NA
16	3	NA
17	4	NA
19	NA	1
20	NA	2
21	NA	3
22	NA	4

**Table 9-9** lists the pin assignments of an MPO-10\*DLC fiber jumper.

**Table 9-9** Pin assignments of an MPO-10\*DLC fiber jumper

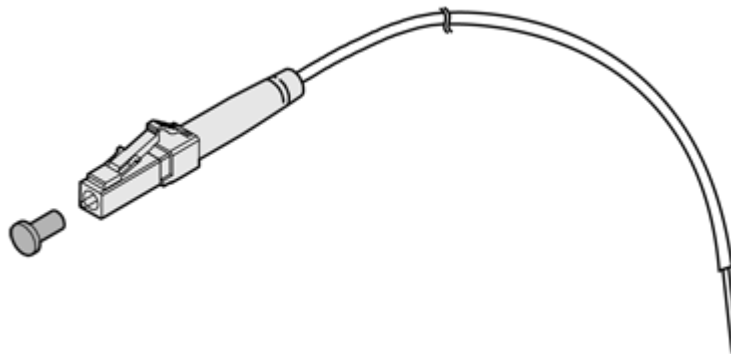
X1 Pin	X2 Pin	X1 Pin	X2 Pin
2	1A	14	1B
3	2A	15	2B
4	3A	16	3B
5	4A	17	4B
6	5A	18	5B
7	6A	19	6B
8	7A	20	7B
9	8A	21	8B
10	9A	22	9B
11	10A	23	10B

## Fiber Pigtail

A fiber pigtail is an optical fiber that has an optical connector at one end and a piece of exposed fiber at the other end. The exposed fiber can be fused to another optical fiber. Fiber pigtails are commonly used to connect optical fibers to optical modules in fiber terminal boxes (optical couplers and jumpers are also used).

**Figure 9-19** shows the structure of a fiber pigtail.

**Figure 9-19** Structure of a fiber pigtail



Fiber pigtails are classified into single-mode and multimode fiber pigtails and are used for short-distance connections.

## Optical Fiber, Optical Connector, and Fiber Adapter

### Optical Fiber

Optical fibers are classified into single-mode fibers and multimode fibers.

- Single-mode fibers have a diameter of 5-10  $\mu\text{m}$  and transmit laser in one mode under a specified wavelength. These fibers support a wide frequency band and a large transmission capacity, so they are used for long-distance transmission. Most single-mode fibers are yellow, as shown in [Figure 9-7](#).
- Multimode fibers have a diameter of 50  $\mu\text{m}$  or 62.5  $\mu\text{m}$  and transmit laser light in multiple modes under a specified wavelength. These fibers have a lower transmission capacity than single-mode fibers and are used for short-distance transmission. Modal dispersion occurs during transmission over multimode fibers.

In the latest cabling infrastructure of ISO/IEC 11801, multimode fibers are classified into four categories: OM1, OM2, OM3, and OM4.

- OM1: traditional 62.5/125  $\mu\text{m}$  multimode fibers. OM1 fibers have a large core diameter and numerical aperture, and provide high light gathering ability and bending resistance.
- OM2: traditional 50/125  $\mu\text{m}$  multimode fibers. OM2 fibers have a small core diameter and numerical aperture. Compared with OM1 fibers, OM2 fibers provide higher bandwidth because they significantly reduce the modal dispersion. When transmitting data at 1 Gbit/s with 850 nm wavelength, OM1 and OM2 fibers support maximum link lengths of 220 m and 550 m, respectively. OM1 and OM2 fibers can provide sufficient bandwidth within a distance of 300 m. Generally, OM1 and OM2 fibers are orange, as shown in [Figure 9-8](#).
- OM3: new-generation multimode fibers, with longer transmission distances than OM1 and OM2 fibers.
- OM4: laser optimized multimode fibers with 50  $\mu\text{m}$  core diameter. OM4 is an improvement to OM3 and only increases the modal bandwidth. OM4 fibers provide 4700 MHz\*km of modal bandwidth, whereas OM3 fibers provide only 2000 MHz\*km of modal bandwidth. Generally, OM3

and OM4 fibers are light green. You can identify OM3 and OM4 fibers by their labels or printed marks.







MPO fibers are used for 40G and 100G optical modules. An MPO fiber consists of multiple multi-mode fiber strands, and each multi-mode fiber strand provides one laser transmission channel. Some fiber suppliers produce 8-strand MPO optical fibers, while some suppliers produce 12-strand or 24-strand MPO fibers.

- A 40G optical module uses four channels to transmit laser and four channels to receive laser. That is, a total of eight channels are required for a 40G optical module. 8-strand and 12-strand MPO fibers use the same definition of fiber channels. Therefore, they are equivalent in functionality when connecting to 40G optical modules.
- When 100G optical modules are used, choose MPO fibers according to the following rules:
  - For CFP optical modules, choose 24-strand fibers for the CFP-100G-SR10 module and 8-strand or 12-strand fibers for other modules.
  - Choose 8-strand or 12-strand fibers for QSFP28 modules.

### Optical Connector

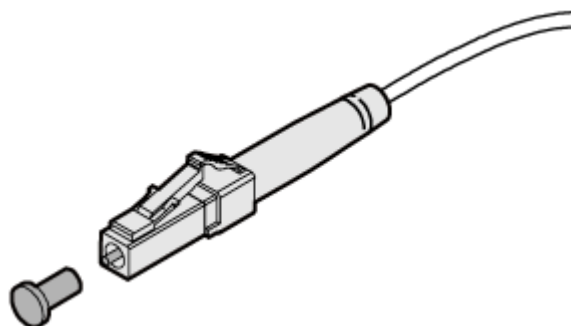
Optical connectors are used to connect optical fibers of the same type. [Table 9-10](#) lists common optical connectors.

**Table 9-10** Common optical connectors

Connect or Type	Optical Connector			
Square connector	SC/PC connector 	LC/PC connector 	MTRJ/PC connector 	MPO connector 
Round connector	FC/PC connector 	ST/PC connector 	-	-

[Figure 9-20](#) shows an LC/PC optical connector.

**Figure 9-20** LC/PC optical connector



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#### NOTICE

When connecting or removing an LC/PC optical connector, align the connector with the optical port and do not rotate the fiber. Pay attention to the following points:

- To connect a fiber, align the optical connector with the optical port and gently insert the optical fiber into the port.
  - To remove a fiber, press the clip on the connector and pull the fiber out.
- 

#### Fiber Adapter

A fiber adapter (also called a flange) is a fiber connection component. Two fiber connectors need to be connected using a fiber adapter. Fiber adapters are widely used in optical distribution frames (ODFs), fiber transmission equipment, and optical instruments.

## 9.4 Ethernet Cable

### Types of Ethernet Cables

An Ethernet cable connects a maintenance terminal to the console port on the device for local or remote maintenance.

Ethernet cables are classified into straight-through cables and crossover cables.

- **Straight-through cable:** The twisted pairs in the RJ45 connectors at both ends are crimped in the same sequence. A straight-through cable connects two devices of different types, for example, a PC and a switch.
- **Crossover cable:** The twisted pairs in the RJ45 connectors at two ends are crimped in different sequences. A crossover cable connects two devices or interfaces of the same type, for example, two PCs.

Crossover and straight cables only differ in wire sequences, and function the same when transmitting data.

Huawei S series models support both straight-through and crossover cables and their ports are adaptive to the cable types.

Use shielded Ethernet cables when devices complying with EN 50121-4 are used in environments that meet EN 50121-4 requirements.

### Appearance and Structure

#### NOTE

The straight-through cable and the crossover cable have the same appearance and use the RJ45 connector.

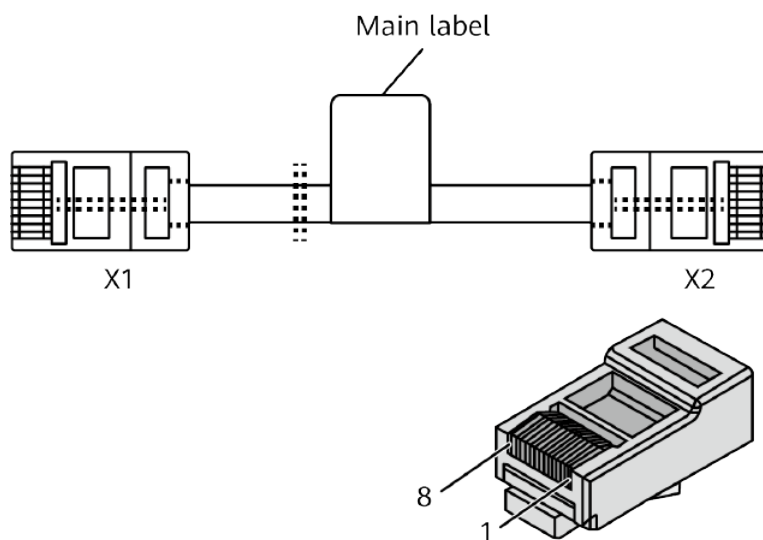
**Figure 9-21** shows the appearance of an Ethernet cable.

**Figure 9-21** Appearance of an Ethernet cable



**Figure 9-22** shows the structure of an Ethernet cable.

**Figure 9-22** Structure of an Ethernet cable



## Pin Assignments

**Table 9-11** lists pin assignments of a straight-through cable.



**Table 9-11** Pin assignments of a straight-through cable

Connector X1	Connector X2	Color	Relationship
X1.2	X2.2	Orange	Twisted pair
X1.1	X2.1	White/Orange	
X1.6	X2.6	Green	Twisted pair
X1.3	X2.3	White/Green	
X1.4	X2.4	Blue	Twisted pair
X1.5	X2.5	White/Blue	
X1.8	X2.8	Brown	Twisted pair
X1.7	X2.7	White/Brown	

**Table 9-12** lists pin assignments of a crossover cable.

**Table 9-12** Pin assignments of a crossover cable

Connector X1	Connector X2	Color	Relationship
X1.6	X2.2	Orange	Twisted pair
X1.3	X2.1	White/Orange	
X1.2	X2.6	Green	Twisted pair
X1.1	X2.3	White/Green	
X1.4	X2.4	Blue	Twisted pair
X1.5	X2.5	White/Blue	
X1.8	X2.8	Brown	Twisted pair
X1.7	X2.7	White/Brown	

 **NOTE**

To achieve the best electrical transmission performance, ensure that the wires connected to pins 1 and 2 and to pins 3 and 6 are twisted pairs.

## 9.5 DC Power Cable (with OT and Cord End Terminals)

## Types of DC Power Cables

DC power cables include a -48 V power return cable and a -48 V power cable. The -48 V power return cable is connected to a terminal marked RTN (+), and the -48 V power cable is connected to a terminal marked NEG (-).

## Appearance and Structure

[Figure 9-23](#) and [Figure 9-24](#) show the appearance and structure of the -48 V power return cable and -48 V power cable.

**Figure 9-23** Appearance of a -48 V power return cable



**Figure 9-24** Appearance of a -48 V power cable



**NOTE**

A -48 V power return cable is black and is connected to the RTN(+) terminal of the DC power supply. A -48 V power cable is blue and is connected to the NEG(-) terminal of the DC power supply.

## Pin Assignments

**Table 9-13** Pin assignments of the power cable

X1	X2	Length	Conductor Cross-Sectional Area
OT	Cord end terminal	3 m	1 mm <sup>2</sup> (18AWG)

## Connection

A DC power cable (with OT and cord end terminals) is connected to a DC power module with OT terminals as follows:

- The OT terminal is connected to the input port on the DC power module of the device.
- The cord end terminal is connected to an external power module.

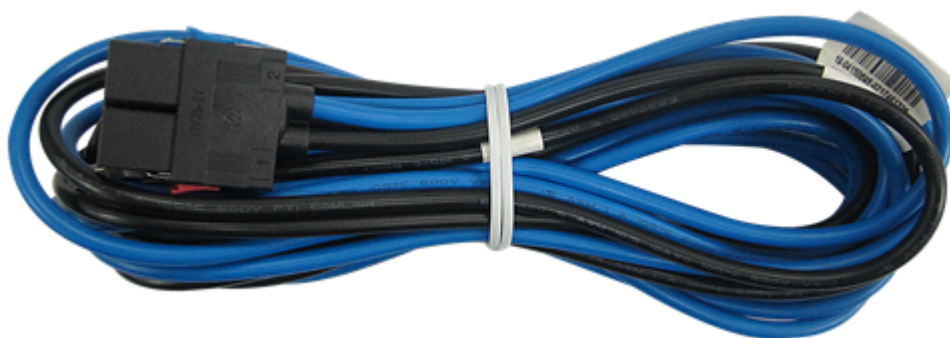
## 9.6 DC Power Cable (with Quick-Connect and Cord End Terminals)

### Appearance and Structure

DC power cables consist of the power cable for a 180 W/260 W/350 W/650 W DC power module and the power cable for a 1000 W DC power module.

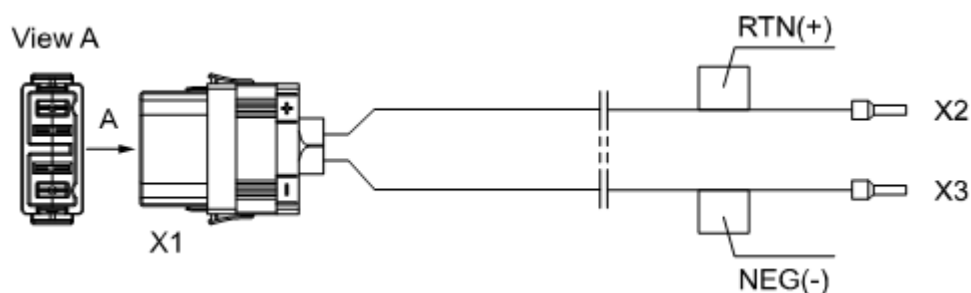
**Figure 9-25** shows the appearance of the power cable for a 180 W/260 W/350 W/650 W DC power module.

**Figure 9-25** Appearance of the power cable for a 180 W/260 W/350 W/650 W DC power module



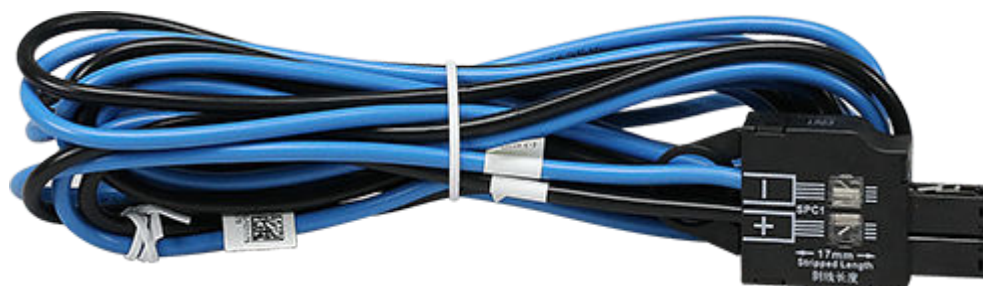
**Figure 9-26** shows the structure of the power cable for a 180 W/260 W/350 W/650 W DC power module.

**Figure 9-26** Structure of the power cable for a 180 W/260 W/350 W/650 W DC power module



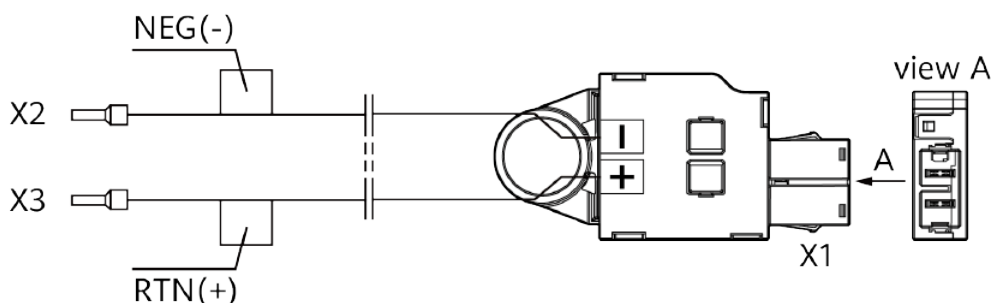
**Figure 9-27** shows the appearance of the power cable for a 1000 W DC power module.

**Figure 9-27** Appearance of the power cable for a 1000 W DC power module



**Figure 9-28** shows the structure of the power cable for a 1000 W DC power module.

**Figure 9-28** Structure of the power cable for a 1000 W DC power module



## Pin Assignments

**Table 9-14** lists the pin assignments of the power cable for a 180 W/260 W/350 W/650 W DC power module.

**Table 9-14** Pin assignments of the power cable for a 180 W/260 W/350 W/650 W DC power module

X1	X2	X3	Length	Conductor Cross-Sectional Area
2 female	Cord end terminal 4 <sup>2</sup> gray	Cord end terminal 4 <sup>2</sup> gray	3 m	3.332 mm <sup>2</sup> (12AWG)

**Table 9-15** lists the pin assignments of the power cable for a 1000 W DC power module.

**Table 9-15** Pin assignments of the power cable for a 1000 W DC power module

X1	X2	X3	Length	Conductor Cross-Sectional Area
2 female	Cord end terminal 4 <sup>2</sup> gray	Cord end terminal 4 <sup>2</sup> gray	3 m	4 mm <sup>2</sup> (14AWG)

## Connection

A DC power cable connects to the DC power module of the device:

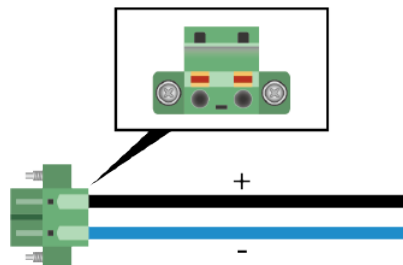
- X1 connector connects to the input port on the DC power module.
- X2/X3 cord end terminal connects to an external power module.

## 9.7 2-Pin DC Power Cable (Phoenix Connector)

### Appearance and Structure

**Figure 9-29** shows the appearance and structure of the 2-pin DC power cable and the Phoenix connector.

**Figure 9-29** Structure of a 2-pin DC power cable and Phoenix connector



## Specifications

**Table 9-16** lists the specifications of the 2-pin DC power cable.

**Table 9-16** Specifications of a 2-pin DC power cable

Minimum Conductor Cross-Sectional Area (for the Power Cable Delivered with the Switch)	Maximum Conductor Cross-Sectional Area
0.75 mm <sup>2</sup> or 18 AWG	3 mm <sup>2</sup> or 12 AWG

## Connection

One end of the 2-pin DC power cable is used with the Phoenix connector and connected to the DC input port of the S5720I-SI. The other end needs to be made onsite. You can make the power cables according to site requirements and connect the cables to the DC power supply system.

## 9.8 AC Power Cable

### Appearance and Structure

**Figure 9-30** C13 straight female to PI straight male AC power cable (used in China)



**Figure 9-31** C7 straight female to PG curving male AC power cable (used in Britain)



**Figure 9-32** C13 straight female to C14 straight male AC power cable (China)



**Figure 9-33** Appearance of a power adapter



**NOTE**

The AC power cables used in different countries and regions have different connector types. [Figure 9-30](#) and [Figure 9-31](#) use Chinese and Britain AC power cables as examples. The power cable and plug delivered with the chassis can only be used on this chassis, and cannot be used on other devices.

## Types of AC Power Cables

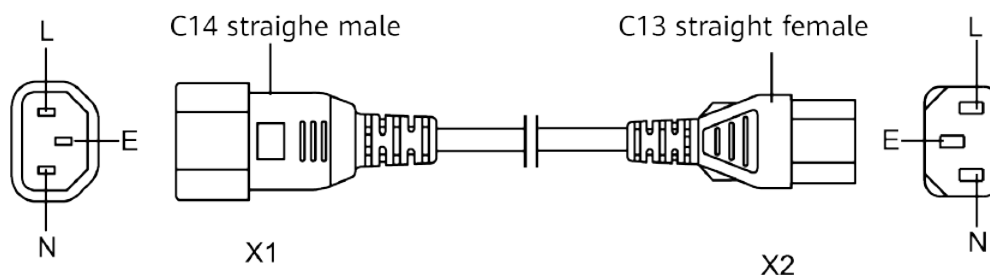
Select AC power cables based on the power supply system in your equipment room. Standard and country-specific AC power cables can be directly connected to power modules.

- Standard power cables: used to transmit power from a PDU. [Figure 9-34](#) shows the structure of a C14 straight male to C13 straight female AC power cable.
- Country-specific power cables: used to transmit power from a country-specific power strip. The cables are delivered in compliance with standards of the destination country or region. For example, PI straight male to C13 straight female AC power cable ([Figure 9-35](#)) is used in China.

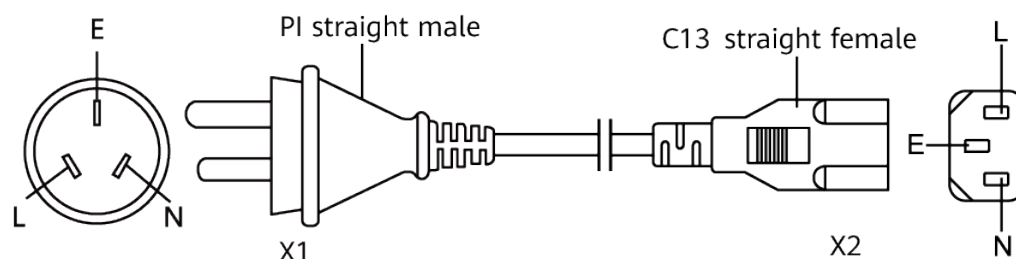


- The AC power cables connected to a power distribution box must have cord end terminals. **Figure 9-36** shows the structure of a cord end to C13 straight female AC power cable.

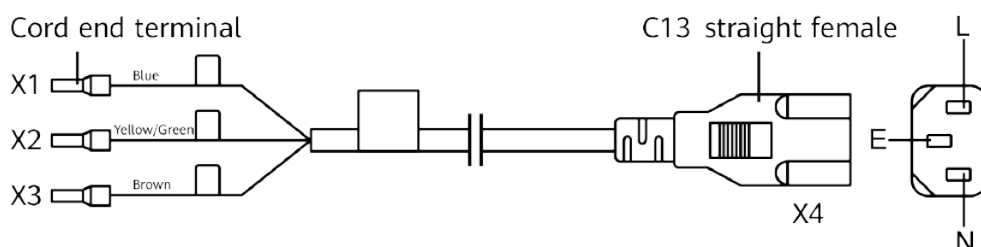
**Figure 9-34** Structure of a C14 straight male to C13 straight female AC power cable



**Figure 9-35** Structure of a PI straight male to C13 straight female AC power cable (used in China)



**Figure 9-36** Structure of a Cord end to C13 straight female AC power cable (used in China)



## Connection

**Table 9-17** shows connections of various AC power cables.

**Table 9-17** Connections of AC power cables

Power Cable Type	Connector Type and Connection	
C14 straight male to C13 straight female AC power cable	C14 straight male connector: connected to a PDU	C13 straight female connector: connected to the AC power

Power Cable Type	Connector Type and Connection	
PI straight male to C13 straight female AC power cable (used in China)	PI straight male connector: connected to a country-specific power strip	socket on the switch. The current rating of the power cable is 10 A.
Cord end to C13 straight female AC power cable (used in China)	Cord end terminal: connected to a power distribution box or power distribution frame. Connect the brown wire to the L terminal, blue wire to the N terminal, and the yellow/green wire to the ground terminal. Different AC power cables may be delivered in compliance with local regulations or customer requirements.	

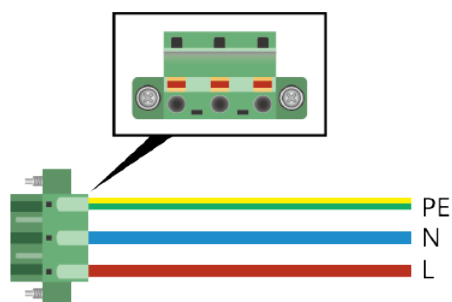
Power Cable Type	Connector Type and Connection	
C7 straight female to PG curving male AC power cable (used in Britain)	PG curving male connector: connected to a country-specific power strip	C7 straight female connector: connected to the power input port on the power adapter.  <b>NOTE</b> The power adapters of the S5735-L8P4S-QA1, S5731-L, and S5731S-L use C7 straight female AC power cables.

## 9.9 3-Pin AC Power Cable (Phoenix Connector)

### Appearance and Structure

Figure 9-37 shows the appearance and structure of the 3-pin AC power cable and the Phoenix connector.

Figure 9-37 Structure of a 3-pin AC power cable and Phoenix connector



**⚠ DANGER**

There is a risk of electric shock when handling the Phoenix connector. To avoid electric shock, ensure that wires are connected in the following sequences: red wire (live wire) connects to L; blue wire (neutral wire) connects to N; yellow/green wire (ground cable) connects to PE. In special circumstances, comply with local regulations or customer requirements.

The power cable and Phoenix connector need to be connected onsite. Ensure that there are no exposed metal parts after the power cable is connected to the Phoenix connector.

## Specifications

**Table 9-18** lists the specifications of the 3-pin AC power cable.

**Table 9-18** Specifications of a 3-pin AC power cable

Minimum Conductor Cross-Sectional Area (for the Power Cable Delivered with the Switch)	Maximum Conductor Cross-Sectional Area
0.75 mm <sup>2</sup> or 18 AWG <b>NOTE</b> The minimum conductor cross-sectional area for the S5720I-28X-PWH-SI-AC series switches is 1.25 mm <sup>2</sup> or 16 AWG.	3 mm <sup>2</sup> or 12 AWG

## Connection

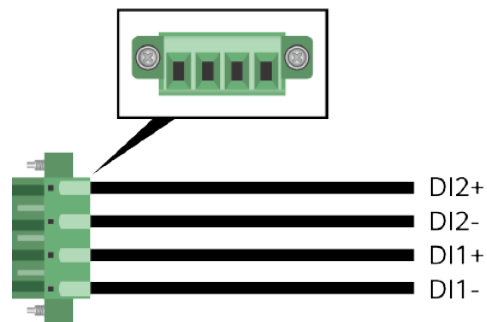
One end of the 3-pin AC power cable is used with the Phoenix connector and connected to the AC input port of the S5720I-SI. The other end needs to be made onsite. You can make the power cables according to site requirements and connect the cables to the AC power supply system.

## 9.10 Monitoring Port Cable (Phoenix Connector)

### Appearance and Structure

**Figure 9-38** shows the structure of the monitoring port cable and the Phoenix connector.

**Figure 9-38** Structure of a monitoring port cable and Phoenix connector



The monitoring ports provide two input lines, which can be used to monitor two types of devices that support output voltage monitoring. DI1+ is the input high level of line 1 and DI1- is the input low level of line 1. Similarly, DI2+ is the input high level of line 2 and DI2- is the input low level of line 2.

## Specifications

The monitoring port must be used with the Phoenix connector (included in the installation accessory package) and the monitoring port cable (purchased separately). The monitoring port cable must be a conductive cable. [Table 9-19](#) lists the specifications of the monitoring port cable.

**Table 9-19** Specifications of a monitoring port cable

Minimum Conductor Cross-Sectional Area	Maximum Conductor Cross-Sectional Area
0.08 mm <sup>2</sup> or 28 AWG	1.5 mm <sup>2</sup> or 16 AWG

## Connection

One end of the monitoring port cable is used with the Phoenix connector and connected to the monitoring port of the S5720I-SI. The other end needs to be made onsite. You can make the power cables according to site requirements and connect the cables to external devices to be monitored.

## 9.11 RPS1800 Power Cable

### Appearance and Structure

[Figure 9-39](#) shows the appearance of the RPS1800 AC power cable.

**Figure 9-39** Appearance of the RPS1800 AC power cable



**NOTE**

The PRS AC power cable used by the RPS1800 has the same appearance as a common AC power cable. However, the RPS AC power cable and common AC power cable connect to different connectors.

## Connection

An RPS1800 AC power cable connects to the following:

- An AC power input port on the RPS1800 chassis
- The mains supply

## 9.12 RPS Cable

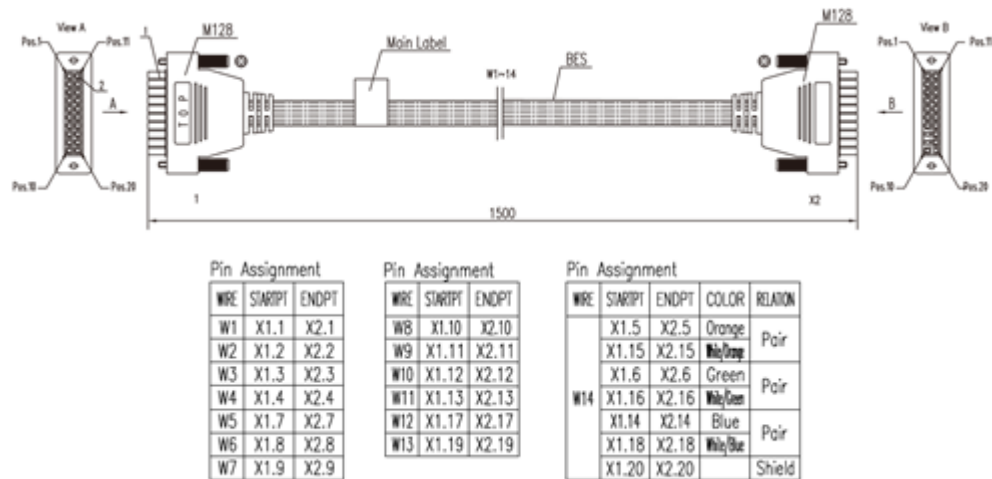
### Appearance and Structure

[Figure 9-40](#) and [Figure 9-41](#) show the appearance and structure of an RPS cable.

**Figure 9-40** Appearance of an RPS cable



**Figure 9-41** Structure of an RPS cable



## Connection

An RPS cable connects an RPS1800 power module to a switch so that the RPS1800 provides power to the switch. An RPS power cable connects to the following:

- A DC power output port on the RPS1800 chassis
- A switch to which power is provided

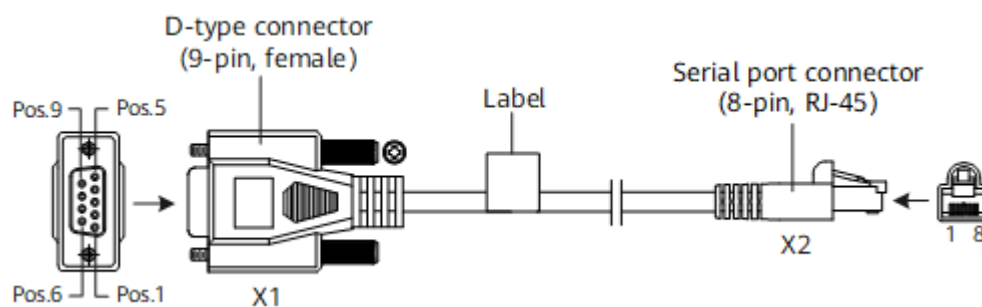
## 9.13 Console Cable

### Appearance and Structure

[Figure 9-42](#) and [Figure 9-43](#) show the appearance and structure of a console cable.

**Figure 9-42** Appearance of a console cable



**Figure 9-43** Structure of a console cable

## Pin Assignments

**Table 9-20** lists the pin assignments of console cable connectors.

**Table 9-20** Pin assignments of console cable connectors

Connector	X1 (DB9)	X2 (RJ45)
Pin assignment	2	3
	3	6
	5	5

## Connection

A console cable connects the console port of the device to the serial port of an operation terminal to transmit configuration data. A shielded cable or an unshielded cable can be used according to the onsite situation.

A console cable connects the device and terminal as follows:

- The 8-pin RJ45 connector is inserted into the console port of the device.
- The DB9 connector is inserted into the terminal serial port.

## 9.14 Dedicated Stack Cable

### Types of Dedicated Stack Cables

Dedicated stack cables are also copper cables, which are used for device stacking. Stacking using stack cables removes the need of configurations.

**Table 9-21** lists the applicable dedicated stack cables.

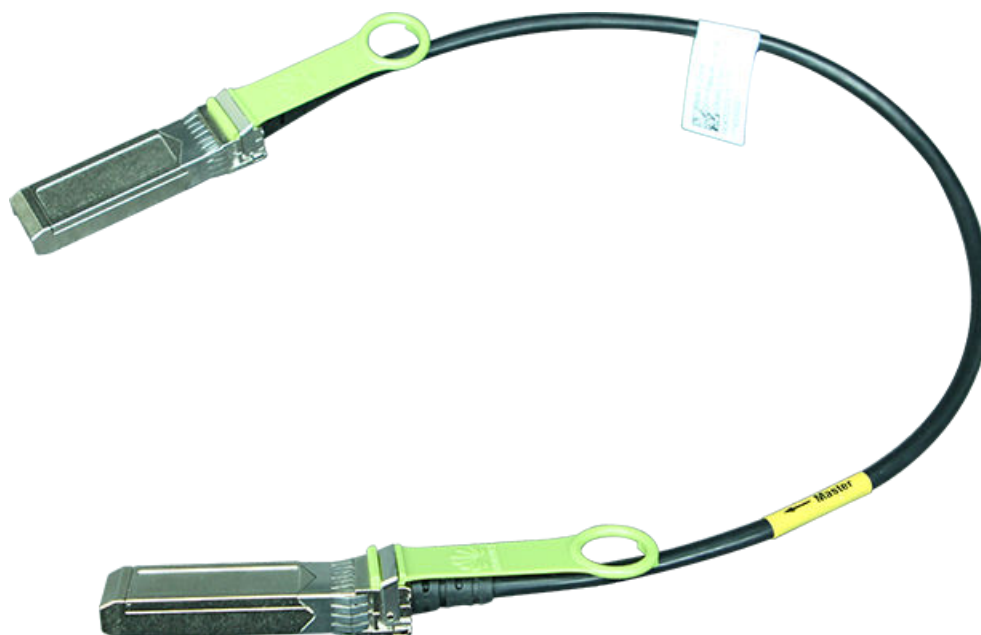


**Table 9-21** Dedicated stack cables

Model	Length	Electrical Attribute	Bend Radius	Connector Type	Part Number
SFP+STACK-CU0M5	0.5 m	Passive	25 mm	SFP+ to SFP+	02311VGK
SFP+STACK-CU1M5	1.5 m	Passive	25 mm	SFP+ to SFP+	02311VGN
QSFP-100G-CU2M	2 m	Passive	45 mm	QSFP28 to QSFP28	02313HVK

## Appearance and Structure

**Figure 9-44** Dedicated stack cable appearance



The two ends of a dedicated stack cable are the master end with the Master tag and the slave end without any tag. The device connected to the master end of a dedicated stack cable assumes the master role and the device connected to the slave end assumes the slave role only after you perform operations as required.

**Figure 9-45** shows the structure of a dedicated stack cable.

**Figure 9-45** Dedicated stack cable structure



## Stack Setup

Dedicated stack cables can only be used to connect the same sub-series switch models, enabling them to set up a stack without manual configuration.

Before setting up a stack, confirm the stack connection mode supported by the member switches, as well as the hardware and software requirements. For details, see "Determining the Stack Connection Support and Mode" under "Typical Stack Configuration of Fixed Switches" in the *Typical Configuration Examples*.

## 9.15 Copper Cable

### Types of Copper Cables

A copper cable, also known as the Direct Attach Copper (DAC) cable, consists of connectors and copper wires and is easy to use. It can directly connect to an optical port on a device. The difference between copper cables and AOC cables is that copper cables use copper wires to transmit signals, whereas AOC cables use optical fibers to transmit signals.

[Table 9-22](#) shows the types of copper cables.

**Table 9-22** Types of copper cables

Model	Length	Electrical attribute	Bend Radius	Connector Type	Part Number
SFP-10G-CU1M	1 m	Passive	25 mm	SFP+ to SFP+	02310MUN
SFP-10G-CU2M	2 m	Passive	25 mm	SFP+ to SFP+	02311JFJ
SFP-10G-CU3M	3 m	Passive	25 mm	SFP+ to SFP+	02310MUP
SFP-10G-CU5M	5 m	Passive	30 mm	SFP+ to SFP+	02310QPR
SFP-10G-AC10M	10 m	Active	25 mm	SFP+ to SFP+	02310MUQ
QSFP-40G-CU1M	1 m	Passive	35 mm	QSFP+ to QSFP+	02310MUG
QSFP-40G-CU3M	3 m	Passive	40 mm	QSFP+ to QSFP+	02310MUH
QSFP-40G-CU5M	5 m	Passive	45 mm	QSFP+ to QSFP+	02310MUJ
QSFP-4SFP10G-CU1M	1 m	Passive	25 mm	QSFP+ to 4*SFP+	02310MUK

Model	Length	Electrical attribute	Bend Radius	Connector Type	Part Number
QSFP-4SFP10G-CU3M	3 m	Passive	25 mm	QSFP+ to 4*SFP+	02310MUL
QSFP-4SFP10G-CU5M	5 m	Passive	30 mm	QSFP+ to 4*SFP+	02310MUM
QSFP28-100G-CU1M	1 m	Passive	70 mm	QSFP28 to QSFP28	02311KNW
QSFP28-100G-CU3M	3 m	Passive	70 mm	QSFP28 to QSFP28	02311KNX
QSFP28-100G-CU5M	5 m	Passive	70 mm	QSFP28 to QSFP28	02311KNY
SFP-25G-CU1M	1 m	Passive	35 mm	SFP28 to SFP28	02311NKS
SFP-25G-CU3M	3 m	Passive	35 mm	SFP28 to SFP28	02311NKV
SFP-25G-CU3M-N	3 m	Passive	40 mm	SFP28 to SFP28	02311MNV
SFP-25G-CU5M	5 m	Passive	40 mm	SFP28 to SFP28	02311MNW

**NOTICE**

The two ends of a copper cable must be covered by electrostatic discharge (ESD) caps.

Copper cables can be used to connect Huawei S switches of the same subseries. AOC optical cables or optical modules can be used to connect to all Huawei S switches.

- The SFP-10G-CU1M and SFP-10G-CU2M copper cable can connect the S6730-H28Y4C or S6730-H24X4Y4C to the S5700-28C-HI-24S (used the LS5D00X4SA00 card), S5720-28X-LI-AC, S5720-28X-LI-24S-AC, S5720-28X-LI-24S-DC, S5700-28X-LI-24S-AC, S5700-28X-LI-24S-DC, S5700-28X-LI-AC, and S5701-28X-LI-24S-AC. The SFP-10G-CU2M can only be used for interconnection between the preceding devices.

**Appearance and Structure**

**Figure 9-46** shows the appearance of an SFP/SFP+/SFP28 copper cable.

**Figure 9-46** Appearance of an SFP/SFP+/SFP28 copper cable



**Figure 9-47** shows the appearance of a QSFP+/QSFP28 copper cable.

**Figure 9-47** Appearance of a QSFP+/QSFP28 copper cable



**Figure 9-48** shows the appearance of a QSFP+ to 4\*SFP+ copper cable.

**Figure 9-48** Appearance of a QSFP+ to 4\*SFP+ copper cable



**Figure 9-49** shows the structure of an SFP/SFP+/SFP28 copper cable.

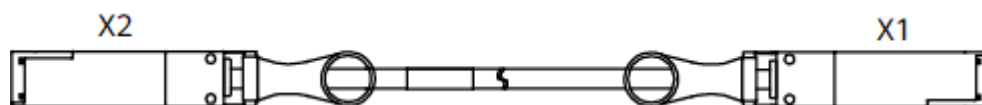
**Figure 9-49** Structure of an SFP/SFP+/SFP28 copper cable



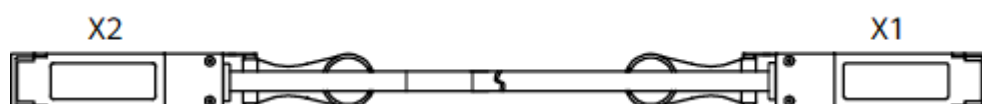
**Figure 9-50** shows the structure of a QSFP+/QSFP28 copper cable.

**Figure 9-50** Structure of a QSFP+/QSFP28 copper cable

Front view:

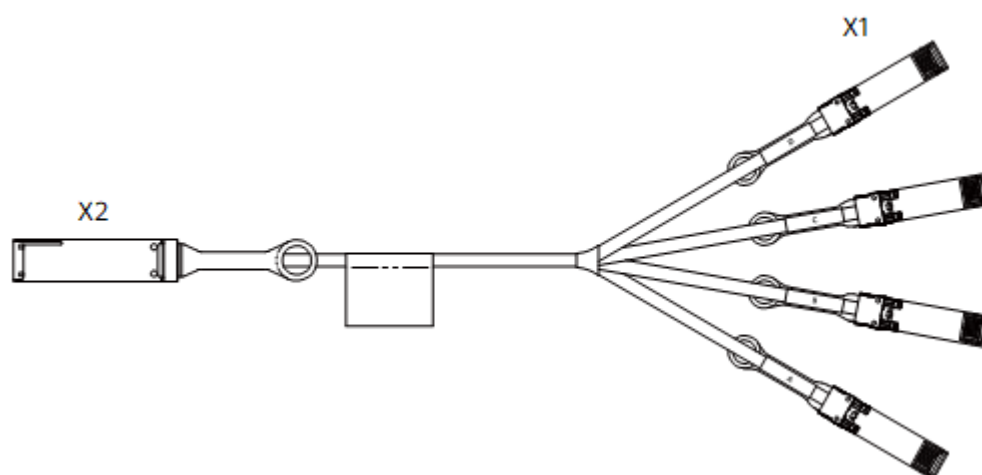


Rear view:



**Figure 9-51** shows the structure of a QSFP+ to 4\*SFP+ copper cable.

**Figure 9-51** Structure of a QSFP+ to 4\*SFP+ copper cable



## Stack Description

In addition to data transmission, copper cables can be used for stack connection.

Before setting up a stack, familiarize yourself with the device-supported stack connection modes and software and hardware requirements. For details, see "Determining the Stack Connection Support and Mode" under "Typical Stack Configuration of Fixed Switches" in the *Typical Configuration Examples*.

## 9.16 Lead-Acid Battery Temperature Sensor

A lead-acid battery temperature sensor monitors ambient temperature of a lead-acid battery in real time to provide charge temperature compensation.

 NOTE

Due to the negative temperature feature of a lead-acid battery, the charge voltage must be adjusted based on the ambient temperature. The battery charger must provide higher charge voltage when the temperature is low and provide lower charge voltage when the temperature is high, so that the lead-acid battery can be fully charged. The PBB-12AHA module can control the charge voltage for the lead-acid battery based on the temperature collected by the temperature sensor. Using a temperature sensor can prolong the life time of the lead-acid battery.

## Appearance and Structure

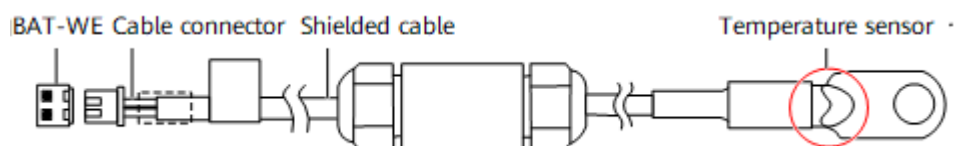
[Figure 9-52](#) shows the appearance of a lead-acid battery temperature sensor.

**Figure 9-52** Appearance of a lead-acid battery temperature sensor



[Figure 9-53](#) shows the structure of a lead-acid battery temperature sensor.

**Figure 9-53** Structure of a lead-acid battery temperature sensor



## Connection

Follow these instructions when using a lead-acid battery temperature sensor:

- Connect the cable connector to the SENSOR port on the PBB-12AHA lead-acid battery charger module.
- Place the temperature probe (with an OT terminal) where it can collect the most accurate ambient temperature of the lead-acid battery. You are advised to place the temperature probe near the lead-acid battery and bind the sensor cable with the power cables of the lead-acid battery. Do not connect the temperature probe to any other heating device. Hang the temperature probe in air and keep it away from any heating device.

## 9.17 First-Generation Hybrid Cable

### Overview

The first-generation hybrid cable (hybrid cable 1.0) is composed of optical fibers and copper cores. It is mainly used to connect a hybrid optical-electrical switch to an AP or a remote unit so that the switch can supply PoE power and transmit data to the AP or remote unit.

The first-generation hybrid cables must be made onsite using the purchased bare wires, auxiliary material packages that contain RJ45 connectors, and auxiliary material packages used for mechanical or fusion splicing of optical fibers. [Table 9-23](#) lists the bare wires and auxiliary material packages.

**Table 9-23** Bare wires and auxiliary material packages

Type	Description	Applicable Country /Region	Optical Fiber/ Connector Type	Part Number
Bare wire	hybrid cable, 1.5mm <sup>2</sup> ,2mm*1.6mm, Indoor,GDVV-2G.657A2(Bow-type )+2x1.5mm <sup>2</sup> (RV),500V,Blue, Black,2 cores,Single mode,9/125	Southeast Asia, Africa, and other countries or regions	Single-mode, G.657A2	25090017
Bare wire	hybrid cable, 1.5mm <sup>2</sup> ,2mm*1.6mm, Indoor,GDVV-2G.657A2(Bow-type )+2x1.5mm <sup>2</sup> (RV), 500V,Red,Blue,2 cores,Single mode,9/125	China	Single-mode, G.657A2	25090017-001
Bare wire	hybrid cable, 1.5mm <sup>2</sup> ,2mm*1.6mm, Indoor,LSZH,GDHH-2G.657A2(Bow-type )+2x1.5mm <sup>2</sup> (H07Z-K), 450V,Red,Blue,2 cores,Single mode,9/125	China	Single-mode, G.657A2	25090018-002

Type	Description	Applicable Country /Region	Optical Fiber/ Connector Type	Part Number
Bare wire	hybrid cable, 1.5mm <sup>2</sup> ,2mm*1.6mm, Indoor,LSZH,For Europe,GDHH-2G.657A2(Bow-type )+2x1.5mm <sup>2</sup> (H07Z-K), 450V,Brown,Blue,2 cores,Single mode,9/125	Europe	Single-mode, G.657A2	25090018
Auxiliary material package containing RJ45 connectors	MPE Site Materials Kit,Photoelectric Hybrid Cable installation Material Package about DC PoE RJ45	Worldwide, used to terminate copper cores	RJ45	02233FKX
Auxiliary material package for mechanical splicing of optical fibers	MPE Site Materials Kit,Photoelectric Hybrid Cable installation Material Package about LC mechanical splicing at both side,Fast Mountable-Mechanical-LC/UPC	Worldwide, used to terminate optical fibers	LC/UPC	02233FKY
Auxiliary material package for mechanical or fusion splicing of optical fibers	MPE Site Materials Kit,Photoelectric Hybrid Cable installation Material Package about LC mechanical splicing and Fiber splicing	Worldwide, used to terminate optical fibers	LC/UPC	02233FLA
Auxiliary material package for fusion splicing of optical fibers	MPE Site Materials Kit,Photoelectric Hybrid Cable installation Material Package about Fiber splicing at both side	Worldwide, used to terminate optical fibers	-	02233FLB



**CAUTION**

Bare wires are delivered by country or region where hybrid cables are used. The difference predominantly lies in the color of copper cores.

The first-generation hybrid cables can only be used indoors and cannot be connected to outdoor APs.

The connected ports cannot go up if a switch and an AP are connected only through copper cores in the first-generation hybrid cable.

It is recommended that optical fibers in the first-generation hybrid cables be fusion spliced onsite. If you assemble optical fibers in hybrid cables in mechanical splicing mode, only SFP-10G-iLR-S optical modules are supported.

## Appearance and Structure

Figure 9-54, Figure 9-55, and Figure 9-56 show the appearance and structure of the first-generation hybrid cable.

Figure 9-54 Cross section of the first-generation hybrid cable

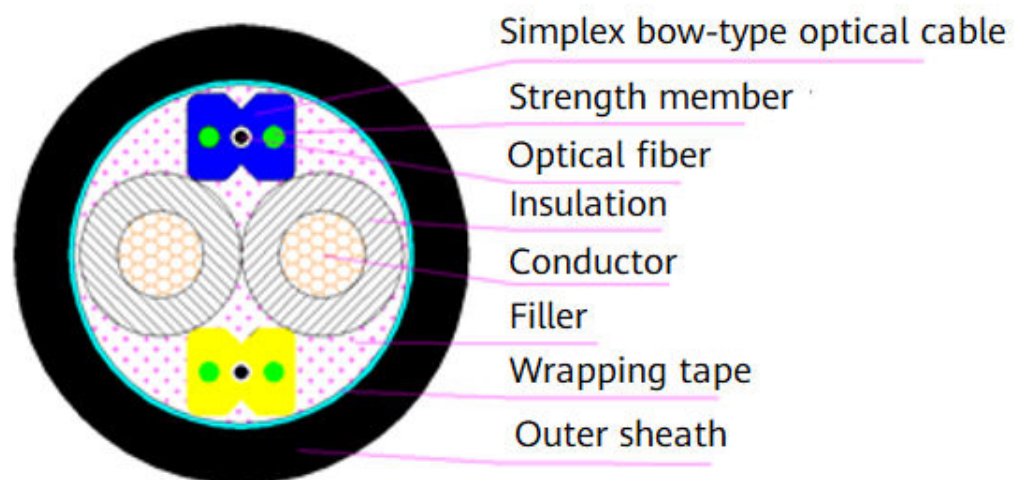
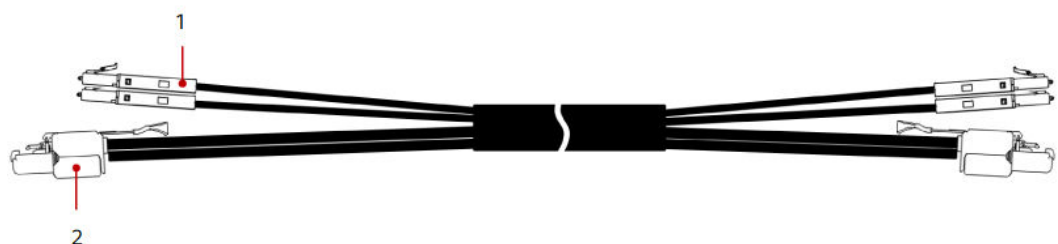


Figure 9-55 Structure of the first-generation hybrid cable



1. LC connector	2. RJ45 connector
-----------------	-------------------

**Figure 9-56** Appearance of the first-generation hybrid cable



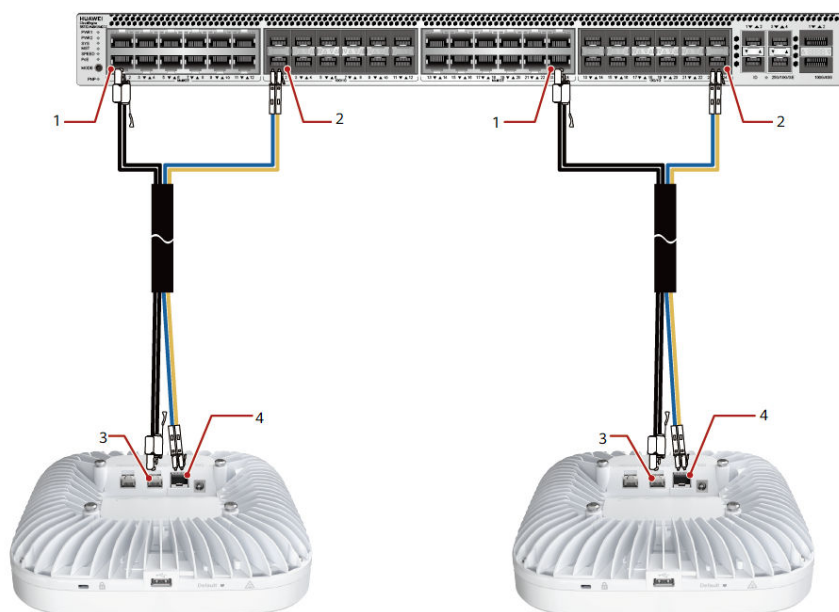
## Cable Connection

The first-generation hybrid cable is typically used in the following scenario:

- The copper cores connect a multi-GE port of a switch to a PoE\_IN port of an AP to allow the switch to supply power to the AP while no data is transmitted over this cable.
- The optical fibers connect an SFP+ port on the switch to an SFP+ port of the AP to transmit data.

**Figure 9-57** shows how the first-generation hybrid cable connects a switch to an AP.

**Figure 9-57** Connections of the first-generation hybrid cable



1. Multi-GE port on a switch	2. 10GE/GE SFP+ port on a switch
3. PoE_IN port on an AP	4. Uplink 10GE/GE SFP+ port on an AP

**NOTE**

Connectors at two ends of each optical fiber in a hybrid cable must be connected to the TX and RX ports on optical modules, one end to a TX port and the other end to an RX port. Optical fibers in all hybrid cables must be connected according to the same rules. [Table 9-24](#) provides the recommended connection rules.

**Table 9-24** Recommended optical fiber connections

Optical Fiber Color	Optical Module on a Switch	Optical Module on an AP
Blue	TX	RX
Yellow	RX	TX

## 9.18 Second-Generation Hybrid Cable

### Overview

The second-generation hybrid cable (hybrid cable 2.0) is composed of optical fibers and copper cores. It is mainly used to connect a hybrid optical-electrical

switch to an AP or remote unit so that the switch can provide power and transmit data for the AP or remote unit.

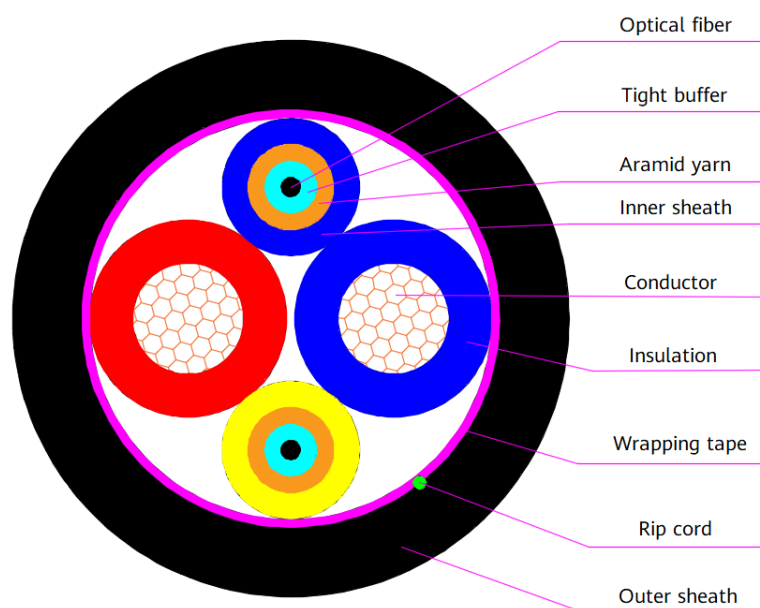
Differences between the first-generation hybrid cable and second-generation hybrid cable:

- Cross-sectional area of the main cable:
  - First-generation hybrid cable: 1.5 mm<sup>2</sup>
  - Second-generation hybrid cable: 17 AWG (1.04 mm<sup>2</sup>) or 21 AWG (0.41 mm<sup>2</sup>)
- Number of occupied device ports and type of the connector used on the port:
  - To connect the first-generation hybrid cable to a device, we need to connect the optical fibers with LC connectors to the common commercial optical module on the device's optical port and connect the copper wires with an RJ45 connector to the device's electrical port. The optical port is used for data transmission, while the electrical port is used for PoE power supply.
  - To connect the second-generation hybrid cable to a device, we only need to insert the PDLC connector on one end of the cable into the hybrid optical-electrical optical module on a hybrid optical-electrical port of the device. This port can be used for data transmission and PoE power supply at the same time.

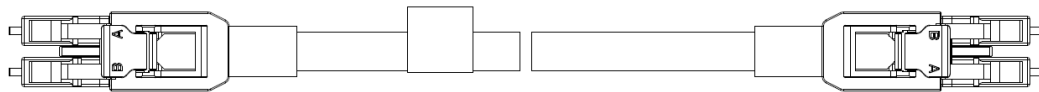
Note that the pigtail or fiber jumper that can be fusion spliced to the main cable of the second-generation hybrid cable can also be fusion spliced to the main cable of the first-generation hybrid cable.

## Appearance and Structure

Figure 9-58 Cross section of a hybrid cable 2.0



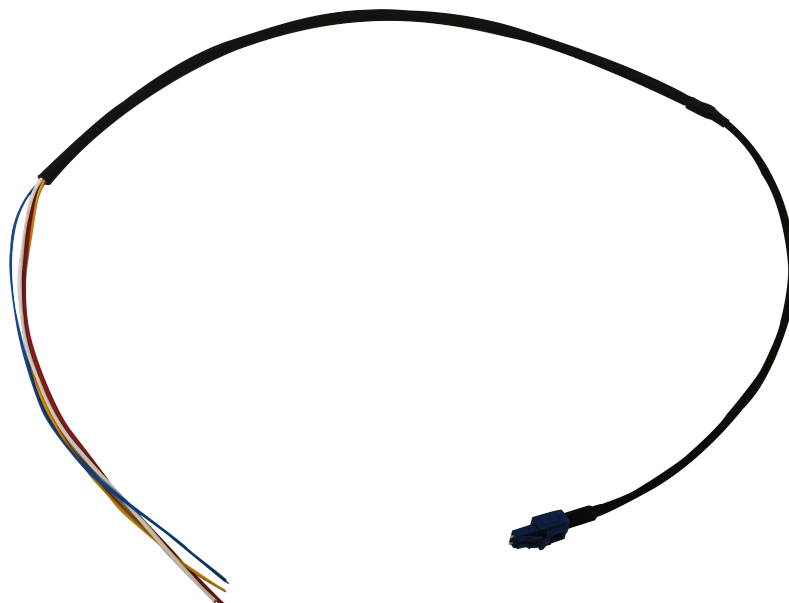
**Figure 9-59** Structure of a hybrid cable 2.0



**Figure 9-60** Appearance of a main cable



**Figure 9-61** Appearance of a pigtail



**Figure 9-62** Appearance of a 1 m jumper

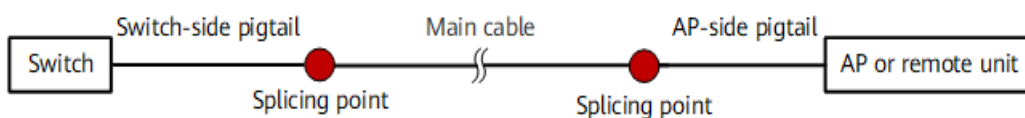


## Cable Connection

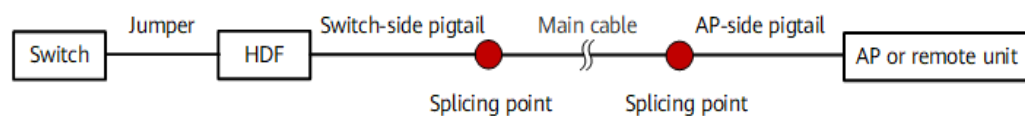
A hybrid cable 2.0 is typically used in the following scenario:

- Direct connection scenario: One end of a hybrid cable 2.0 connects to a hybrid optical-electrical port of a switch, and the other end connects to a hybrid optical-electrical port of an AP or remote unit, as shown in [Figure 9-63](#).
- HDF-based connection: Connect one end of the jumper to the hybrid optical-electrical port of the switch and the other end to the hybrid optical-electrical port of the HDF. Connect one end of the hybrid cable 2.0 to the hybrid optical-electrical port of the HDF and the other end to the hybrid optical-electrical port of the AP or remote unit, as shown in [Figure 9-64](#).

**Figure 9-63** Direct connection



**Figure 9-64** HDF-based connection



 **NOTE**

- Hybrid cable pigtails are classified into switch-side pigtails and AP-side pigtails, which correspond to different cable part numbers. The internal sequence of the two types of pigtails is different. The pigtails of the same type cannot be used at both ends of a link. That is, switch-side pigtails are used on the switch, and AP-side pigtails are used on the AP or RU. Before splicing, identify the pigtail types by labels on the cables. When connecting hybrid cables and pigtails, ensure that the optical fibers and power cables of the same color are connected.
- The connector of a hybrid cable 2.0 cannot be inserted into a common optical module and must be used with a hybrid module (SFP-GE-Hybrid or SFP-10G-Hybrid).
- Connectors at two ends of each optical fiber in a hybrid cable 2.0 must be connected to the TX and RX ports on optical modules, one end to a TX port and the other end to an RX port. Optical fibers in all hybrid cables 2.0 must be connected according to the same rules. [Table 9-25](#) provides the recommended connection rules.
- The hybrid optical-electrical switch uses hybrid cables 2.0 to connect to and supply power to APs or remote units of specific models. (For details about the AP models to which hybrid cables can supply power, see the WLAN AP product documentation. The remote unit that supports hybrid cables is S5731-L4P2HW-RUA, S5731S-L4P2HW-RUA, S5731-L4P2HT-RUA, S5731S-L4P2HT-RUA, S5731-L8P2HT-RUA, and S5731S-L8P2HT-RUA.)
- The hybrid optical-electrical switch cannot be connected to devices other than remote units or APs using hybrid cables 2.0.

**Table 9-25** Recommended optical fiber connections

Optical Fiber Color	Optical Module on a Switch	Optical Module on an AP or a Remote Unit
Blue	TX	RX
Yellow	RX	TX

## Technical Specifications

**Table 9-26** Technical specifications of the hybrid cable 2.0 and its components

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/Region
Main cable	25090103	HYC-GDFJVV-17AWG-RB-SM	hybrid cable,Indoor,PVC,Black,GDFJVV-2G. 657A2+2*17AWG(UL1569),17AWG,Red,Blue Sub-power cable, 1.6mm,6.2mm, 2cores,Single mode, 9/125	-	-	IEC 60332-1, ZC, CPR: Eca	31mm	-20°C to 75°C	China
	25090103-001	HYC-GDFJVV-17AWG-BB-SM	hybrid cable,Indoor,PVC,Black,GDFJVV-2G. 657A2+2*17AWG(UL1569), 17AWG,Black,Blue Sub-power cable, 1.6mm,6.2mm, 2cores,Single mode, 9/125	-	-	IEC 60332-1, ZC, CPR: Eca	31mm	-20°C to 75°C	Southeast Asia and other countries or regions
	25090104	HYC-GDFJVV-21AWG-RB-SM	hybrid cable,Indoor,PVC,Black,GDFJVV-2G. 657A2+2*21AWG(UL1569),21AWG,Red,Blue Sub-power cable, 1.6mm,5.7mm, 2cores,Single mode, 9/125	-	-	IEC 60332-1, ZC, CPR: Eca	28.5mm	-20°C to 75°C	China



Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/Region
	25090104-001	HYC-GDFJVV-21AWG-BB-SM	hybrid cable,Indoor,PVC,Black,GDFJVV-2G. 657A2+2*21AWG(UL1569), 21AWG,Black,Blue Sub-power cable, 1.6mm,5.7mm, 2cores,Single mode, 9/125	-	-	IEC 60332-1, ZC, CPR: Eca	28.5mm	-20°C to 75°C	Southeast Asia and other countries or regions
	25090105	HYC-GDFJHH-17AWG-RB-SM	hybrid cable,Indoor,LSZH,Black,GDFJHH-2G. 657A2+2*17AWG(UL3385),17AWG,Red,Blue Sub-power cable, 1.6mm,7.8mm, 2cores,Single mode, 9/125	-	-	IEC 60332-1, IEC 60332-3-24, GB 31247 B1, CPR: B2ca-s1, d1, a1	39mm	-20°C to 75°C	China

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/Region
	25090105-001	HYC-GDFJH H-17A WG-RW-SM	hybrid cable,Indoor,LSZH,Black,GDFJHH-2G. 657A2+2*17AWG(UL3385), 17AWG,Red,White Sub-power cable, 1.6mm,7.8mm, 2cores,Single mode, 9/125	-	-	IEC 60332-1, IEC 60332-3-24, GB 31247 B1, CPR: B2ca-s1, d1, a1	39mm	-20°C to 75°C	Europe
	25090106	HYC-GDFJH H-21A WG-RB-SM	hybrid cable,Indoor,LSZH,Black,GDFJHH-2G. 657A2+2*21AWG(UL3385),21AWG,Red,Blue Sub-power cable, 1.6mm,9.1mm, 2cores,Single mode, 9/125	-	-	IEC 60332-1, IEC 60332-3-24, GB 31247 B1, CPR: B2ca-s1, d1, a1	35.5mm	-20°C to 75°C	China

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/Region
	25090106-001	HYC-GDFJH H-21A WG-RW-SM	hybrid cable,Indoor,LSZH,Black,GDFJHH-2G. 657A2+2*21AWG(UL3385), 21AWG,Red,White Sub-power cable, 1.6mm,7.1mm, 2cores,Single mode, 9/125	-	-	IEC 60332-1, IEC 60332-3-24, GB 31247 B1, CPR: B2ca-s1, d1, a1	35.5mm	-20°C to 75°C	Europe
Switch-side pigtail	04170005	PDLC-1.2m-ODF-CN	Hybrid Cable Assembly,1P1F, 1.2m,PDLC/UPC,GDFJV-2G. 657A2+2*17AWG,,Red,Blue,Switch	PDL C/U PC	1.2m	IEC60332-3-24	31mm	-20°C to 75°C	China
	04170017	PDLC-1.2m-ODF-SEA	Hybrid Cable Assembly,1P1F, 1.2m,PDLC/UPC,GDFJV-2G. 657A2+2*17AWG,,Black,Blue,Switch	PDL C/U PC	1.2m	IEC60332-3-24	31mm	-20°C to 75°C	Southeast Asia and other countries or regions

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/Region
	04170024	PDLC-1.2m-ODF-EUR	Hybrid Cable Assembly,1P1F,1.2m,PDLC/UPC,GDFJHH-2G.657A2+2*17AWG,,Red,White,Switch	PDL C/U PC	1.2m	IEC60332-3-24	39mm	-20°C to 75°C	Europe
	04170005-004	PDLC-0.8m-ODF-CN	Hybrid Cable Assembly,1P1F,0.8m,PDLC/UPC,GDFJV-2G.657A2+2*17AWG,,Red,Blue,Switch	PDL C/U PC	0.8m	IEC60332-3-24	31mm	-20°C to 75°C	China
	04170017-001	PDLC-0.8m-ODF-SEA	Hybrid Cable Assembly,1P1F,0.8m,PDLC/UPC,GDFJV-2G.657A2+2*17AWG,,Black,Blue,Switch	PDL C/U PC	0.8m	IEC60332-3-24	31mm	-20°C to 75°C	Southeast Asia and other countries or regions
	04170024-001	PDLC-0.8m-ODF-EUR	Hybrid Cable Assembly,1P1F,0.8m,PDLC/UPC,GDFJHH-2G.657A2+2*17AWG,,Red,White,Switch	PDL C/U PC	0.8m	IEC60332-3-24	39mm	-20°C to 75°C	Europe
Appendix or remote	04170006-001	PDLC-0.4m-AP-CN	Hybrid Cable Assembly,1P1F,0.4m,PDLC/UPC,GDFJV-2G.657A2+2*17AWG,,Red,Blue,AP	PDL C/U PC	0.4m	IEC60332-3-24	31mm	-20°C to 75°C	China

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/Region
e u n i t s i d e p i g t a i l	0417 0018 -001	PDLC-0. 4m-AP- SEA	Hybrid Cable Assembly,1P1F, 0.4m,PDLC/UPC,GDFJV-2G. 657A2+2*17AWG,/,Black,Blue,AP	PDL C/U PC	0. 4 m	IEC6 033 2-3- 24	31 m m	-20 °C to 75° C	Sou the ast Asia and oth er cou ntri es or regi ons
	0417 0023 -001	PDLC-0. 4m-AP- EUR	Hybrid Cable Assembly,1P1F, 0.4m,PDLC/UPC,GDFJHH-2G. 657A2+2*17AWG,/,Red,White,AP	PDL C/U PC	0. 4 m	IEC6 033 2-3- 24	39 m m	-20 °C to 75° C	Eur ope
J u m p e r	0417 0003	PDLC- PDLC-0. 3m-CN	Hybrid Cable Assembly,1P1F, 0.3m,PDLC/UPC,2G. 657A2+2*17AWG,PDL C/UPC,Red,Blue,Switch	PDL C/U PC to PDL C/U PC	0. 3 m	IEC6 033 2-3- 24	20 m m	-20 °C to 75° C	Chi na
	0417 0001	PDLC- PDLC-3. 0m-CN	Hybrid Cable Assembly,1P1F, 3m,PDLC/UPC,GDFJV-2G. 657A2+2*17AWG,PDL C/UPC,Red,Blue,Switch	PDL C/U PC to PDL C/U PC	3. 0 m	IEC6 033 2-3- 24	31 m m	-20 °C to 75° C	Chi na
	0417 0001 -001	PDLC- PDLC-7. 0m-CN	Hybrid Cable Assembly,1P1F, 7m,PDLC/UPC,GDFJV-2G. 657A2+2*17AWG,PDL C/UPC,Red,Blue,Switch	PDL C/U PC to PDL C/U PC	7. 0 m	IEC6 033 2-3- 24	31 m m	-20 °C to 75° C	Chi na

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/Region
	0417-0001-002	PDLC-PDLC-1.5m-CN	Hybrid Cable Assembly,1P1F, 1.5m,PDLC/UPC,GDFJVV-2G. 657A2+2*17AWG,PDLC/UPC,Red,Blue,Switch	PDL C/U PC to PDL C/U PC	1.5m	IEC60332-3-24	31mm	-20°C to 75°C	China
	0417-0004	PDLC-DLC+PRJ45-0.3m-CN	Hybrid Cable Assembly,1P1F, 0.3m,PDLC/UPC,2G. 657A2+2*17AWG,PRJ45+DLC/UPC,Red,Blue,Switch	PDL C/U PC to PRJ45+DLC/UPC	0.3m	IEC60332-3-24	20mm	-20°C to 75°C	China
	0417-0002	PDLC-DLC+PRJ45-3.0m-CN	Hybrid Cable Assembly,1P1F, 3m,PDLC/UPC,GDFJVV-2G. 657A2+2*17AWG,PRJ45+DLC/UPC,Red,Blue,Switch	PDL C/U PC to PRJ45+DLC/UPC	3.0m	IEC60332-3-24	31mm	-20°C to 75°C	China
	0417-0002-001	PDLC-DLC+PRJ45-7.0m-CN	Hybrid Cable Assembly,1P1F, 7m,PDLC/UPC,GDFJVV-2G. 657A2+2*17AWG,PRJ45+DLC/UPC,Red,Blue,Switch	PDL C/U PC to PRJ45+DLC/UPC	7.0m	IEC60332-3-24	31mm	-20°C to 75°C	China
	0417-0002-002	PDLC-DLC+PRJ45-1.5m-CN	Hybrid Cable Assembly,1P1F, 1.5m,PDLC/UPC,GDFJVV-2G. 657A2+2*17AWG,PRJ45+DLC/UPC,Red,Blue,Switch	PDL C/U PC to PRJ45+DLC/UPC	1.5m	IEC60332-3-24	31mm	-20°C to 75°C	China

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/Region
	0417-0015	PDLC-PDLC-0.3m-SEA	Hybrid Cable Assembly,1P1F,0.3m,PDLC/UPC,2G.657A2+2*17AWG,PDL C/UPC,Black,Blue,Switch	PDL C/U PC to PDL C/U PC	0.3m	IEC60332-3-24	20mm	-20°C to 75°C	Southeast Asia and other countries or regions
	0417-0013-002	PDLC-PDLC-1.5m-SEA	Hybrid Cable Assembly,1P1F,7m,PDLC/UPC,GDFJVV-2G.657A2+2*17AWG,PDL C/UPC,Black,Blue,Switch	PDL C/U PC to PDL C/U PC	1.5m	IEC60332-3-24	31mm	-20°C to 75°C	Southeast Asia and other countries or regions
	0417-0013-001	PDLC-PDLC-3.0m-SEA	Hybrid Cable Assembly,1P1F,3m,PDLC/UPC,GDFJVV-2G.657A2+2*17AWG,PDL C/UPC,Black,Blue,Switch	PDL C/U PC to PDL C/U PC	3.0m	IEC60332-3-24	31mm	-20°C to 75°C	Southeast Asia and other countries or regions

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/Region
	0417-0013	PDLC-PDLC-7.0m-SEA	Hybrid Cable Assembly,1P1F,7m,PDLC/UPC,GDFJVV-2G.657A2+2*17AWG,PDLC/UPC,Black,Blue,Switch	PDL C/U PC to PDL C/U PC	7.0m	IEC60332-3-24	31mm	-20°C to 75°C	Southeast Asia and other countries or regions
	0417-0014-002	PDLC-DLC+PRJ45-1.5m-SEA	Hybrid Cable Assembly,1P1F,1.5m,PDLC/UPC,GDFJVV-2G.657A2+2*17AWG,PRJ45+DLC/UPC,Black,Blue,Switch	PDL C/U PC to PRJ45+DLC/UPC	1.5m	IEC60332-3-24	31mm	-20°C to 75°C	Southeast Asia and other countries or regions
	0417-0014-001	PDLC-DLC+PRJ45-3.0m-SEA	Hybrid Cable Assembly,1P1F,3m,PDLC/UPC,GDFJVV-2G.657A2+2*17AWG,PRJ45+DLC/UPC,Black,Blue,Switch	PDL C/U PC to PRJ45+DLC/UPC	3.0m	IEC60332-3-24	31mm	-20°C to 75°C	Southeast Asia and other countries or regions



Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/Region
	04170014	PDLC-DLC+PRJ45-7.0m-SEA	Hybrid Cable Assembly,1P1F,7m,PDLC/UPC,GDFJV-2G.657A2+2*17AWG,PRJ45+DLC/UPC,Black,Blue,Switch	PDL C/U PC to PRJ45+DLC/UPC	7.0m	IEC60332-3-24	31m	-20°C to 75°C	Southeast Asia and other countries or regions
	04170016	PDLC-DLC+PRJ45-0.3m-SEA	Hybrid Cable Assembly,1P1F,0.3m,PDLC/UPC,2G.657A2+2*17AWG,PRJ45+DLC/UPC,Black,Blue,Switch	PDL C/U PC to PRJ45+DLC/UPC	0.3m	IEC60332-3-24	20m	-20°C to 75°C	Southeast Asia and other countries or regions
	04170021	PDLC-PDLC-0.3m-EUR	Hybrid Cable Assembly,1P1F,0.3m,PDLC/UPC,2G.657A2+2*17AWG,PDL C/UPC,Red,White,Switch	PDL C/U PC to PDL C/U PC	0.3m	IEC60332-3-24	20m	-20°C to 75°C	Europe
	04170019-002	PDLC-PDLC-1.5m-EUR	Hybrid Cable Assembly,1P1F,1.5m,PDLC/UPC,GDFJHH-2G.657A2+2*17AWG,PDL C/UPC,Red,White,Switch	PDL C/U PC to PDL C/U PC	1.5m	IEC60332-3-24	39m	-20°C to 75°C	Europe

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/Region
	0417-0019-001	PDLC-PDLC-3.0m-EUR	Hybrid Cable Assembly,1P1F,3m,PDLC/UPC,GDFJHH-2G.657A2+2*17AWG,PDLC/UPC,Red,White,Switch	PDL C/U PC to PDL C/U PC	3.0m	IEC60332-3-24	39mm	-20°C to 75°C	Europe
	0417-0019	PDLC-PDLC-7.0m-EUR	Hybrid Cable Assembly,1P1F,7m,PDLC/UPC,GDFJHH-2G.657A2+2*17AWG,PDLC/UPC,Red,White,Switch	PDL C/U PC to PDL C/U PC	7.0m	IEC60332-3-24	39mm	-20°C to 75°C	Europe
	0417-0020-002	PDLC-DLC+PRJ45-1.5m-EUR	Hybrid Cable Assembly,1P1F,1.5m,PDLC/UPC,GDFJHH-2G.657A2+2*17AWG,PRJ45+DLC/UPC,Red,White,Switch	PDL C/U PC to PRJ45+DLC/UPC	1.5m	IEC60332-3-24	39mm	-20°C to 75°C	Europe
	0417-0020-001	PDLC-DLC+PRJ45-3.0m-EUR	Hybrid Cable Assembly,1P1F,3m,PDLC/UPC,GDFJHH-2G.657A2+2*17AWG,PRJ45+DLC/UPC,Red,White,Switch	PDL C/U PC to PRJ45+DLC/UPC	3.0m	IEC60332-3-24	39mm	-20°C to 75°C	Europe
	0417-0020	PDLC-DLC+PRJ45-7.0m-EUR	Hybrid Cable Assembly,1P1F,7m,PDLC/UPC,GDFJHH-2G.657A2+2*17AWG,PRJ45+DLC/UPC,Red,White,Switch	PDL C/U PC to PRJ45+DLC/UPC	7.0m	IEC60332-3-24	39mm	-20°C to 75°C	Europe

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/Region
	04170022	PDLC-DLC+PRJ45-0.3m-EUR	Hybrid Cable Assembly,1P1F,0.3m,PDLC/UPC,2G.657A2+2*17AWG,PRJ45+DLC/UPC,Red,White,Switch	PDL C/U PC to PRJ4 5+D LC/UPC	0.3m	IEC60332-3-24	20mm	-20°C to 75°C	Europe

# 10 Pluggable Modules for Interfaces

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## 10.24 10GE SFP+ Hybrid Modules

# 10.1 Important Notes About Using Optical Modules Certified for Huawei Switches

## 10.1.1 How to Identify Huawei-Certified Switch Optical Modules

### NOTICE

- A switch must use optical or copper modules that have been certified for use on Huawei S switches. Non-certified optical or copper modules cannot ensure transmission reliability and may affect service stability. Huawei is not liable for any problem caused by the use of non-certified optical or copper modules and will not fix such problems.
- The methods provided here are only for reference. To confirm whether optical modules you are using have been certified for use on Huawei S switches, contact Huawei technical support.

## 10GE or Lower Speed Optical Modules

Huawei started certification on 10GE or lower speed optical modules for S switch products on July 1, 2013.

To determine whether optical modules delivered for Huawei S switches before July 1, 2013 are certified ones, contact Huawei technical support.

If your optical modules are delivered after July 1, 2013, use either of the following methods to determine whether they have been certified by Huawei.

### Method 1: Check for "HUAWEI" on the label

If an optical module has been certified by Huawei, its label contains "HUAWEI", as shown in [Figure 10-1](#).

**Figure 10-1** "HUAWEI" on the label of a Huawei-certified S switch optical module



### Method 2: Run the command

An optical module has received Huawei S switch certification if it meets the following conditions:

For a device running V200 version:

- In the **display elabel** command output, the **Manufactured** field displays a date later than 2013-07-01.

- In the **display version** command output, the displayed version is V200R001C00 or later.
- In the **display transceiver** command output, the **Vendor Name** field displays **HUAWEI**.

 **NOTE**

The SFP-FE-SX-MM1310 (part number: 02315233) is a Huawei-certified 100M optical module. However, the **Vendor Name** field displays the original manufacturer name, instead of **HUAWEI**.

For copper modules, the **Vendor Name** field also displays the original manufacturer name, instead of **HUAWEI**.

## 25GE, 40GE, and 100GE Optical Modules

Huawei started certification on 25GE, 40GE, and 100GE optical modules for S switch products on January 1, 2016.

To determine whether optical modules delivered for Huawei S switches before January 1, 2016 are certified ones, contact Huawei technical support.

If your optical modules are delivered after January 1, 2016, use either of the following methods to determine whether they have been certified by Huawei.

### Method 1: Check for "HUAWEI" on the label

If an optical module has been certified by Huawei, its label contains "HUAWEI", as shown in [Figure 10-1](#).

### Method 2: Run the command

A 25GE, 40GE, or 100GE optical module has received Huawei S switch certification if it meets the following conditions:

For a device running V200 version:

- In the **display elabel** command output, the **Manufactured** field displays a date later than 2016-01-01.
- In the **display version** command output, the displayed version is V200R008 or later.
- In the **display transceiver** command output, the **Vendor Name** field displays **HUAWEI**.

 **NOTE**

For the optical modules connected to high-speed cables or AOC cables, the **Vendor Name** field displays the original manufacturer name, instead of **HUAWEI**. For the methods of checking whether such an optical module has been certified by Huawei, contact Huawei technical support personnel.

## 10.1.2 Risks of Using Non-Huawei-Certified Switch Optical Modules

During certification of optical modules for Huawei switches, Huawei completes comprehensive functionality verification to ensure quality of optical modules. The verified items include optical module plug/unplug, transmit optical power, receive

optical power, signal transmission quality, data reading, error tolerance, compatibility, electromagnetic compatibility (EMC), and environmental parameters.

Non-Huawei-certified switch optical modules may cause the following problems:

- Non-standard structure and size cause failures to install optical modules on adjacent optical interfaces.  
Structures or sizes of some non-Huawei-certified optical modules do not comply with the Multi-Source Agreement (MSA). When such an optical module is installed on an optical interface, the size of this optical module hinders optical module installation on adjacent optical interfaces.
- Data bus defects cause suspension of a switch's data bus.  
Some non-Huawei-certified optical modules have defects in data bus designs. Using such an optical module on a switch causes suspension of the connected data bus on the switch. As a result, data on the suspended bus cannot be read.
- Improper edge connector size damages electronic devices of optical interfaces.  
If a non-Huawei-certified switch optical module with improper edge connector size is used on an optical interface, electronic devices of the optical interface will be damaged by short circuits.
- Unnormalized temperature monitoring causes incorrect alarms.  
The temperature monitoring systems of some non-Huawei-certified switch optical modules do not comply with industry standards and report temperature values higher than the real temperature. When such optical modules are used on a switch, the system will report incorrect temperature alarms.
- Improper register settings cause errors or failures in reading parameters or diagnostic information.  
Some non-Huawei-certified switch optical modules have improper register values on page A0, which can cause errors or failures when the system attempts to read parameters or diagnostic information from a data bus.
- Some non-Huawei-certified switch optical modules are not designed in compliance with EMC standards and have low anti-interference capability. Additionally, they bring electromagnetic interference to nearby devices.
- The operating temperature ranges of non-Huawei-certified switch optical modules cannot meet service requirements. When they are used under relatively high temperature, the optical power decreases, resulting in service interruption.

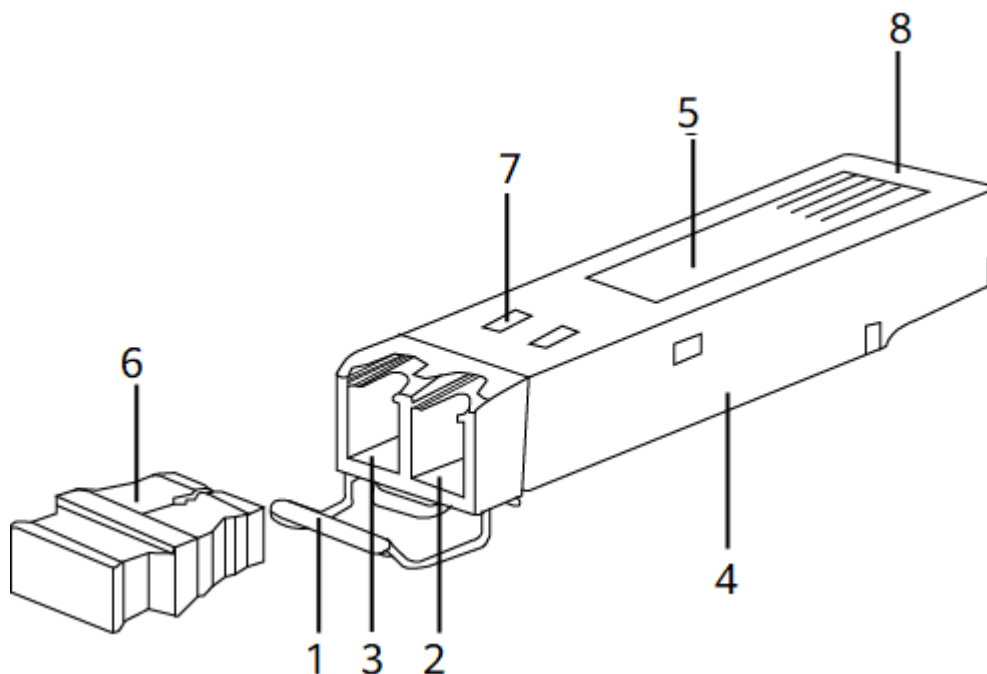
## 10.2 Understanding Optical Modules

### 10.2.1 What Is an Optical Module

On an optical network, a sender needs to convert electrical signals into optical signals before sending them to a receiver, and the receiver needs to convert received optical signals into electrical signals. An optical module is a component

that completes electrical/optical conversion on an optical network. **Figure 10-2** shows the structure of an optical module.

**Figure 10-2** Structure of an optical module (using an SFP/eSFP optical module as an example)



1. Handle	2. Receiver	3. Transmitter
4. Shell	5. Label	6. Dust plug
7. Spring	8. Connector	-

**Figure 10-3** shows an SFP/eSFP optical module.



**Figure 10-3** SFP/eSFP optical module



**Figure 10-4** shows the appearance of an SFP+ optical module.

**Figure 10-4** Appearance of an SFP+ optical module



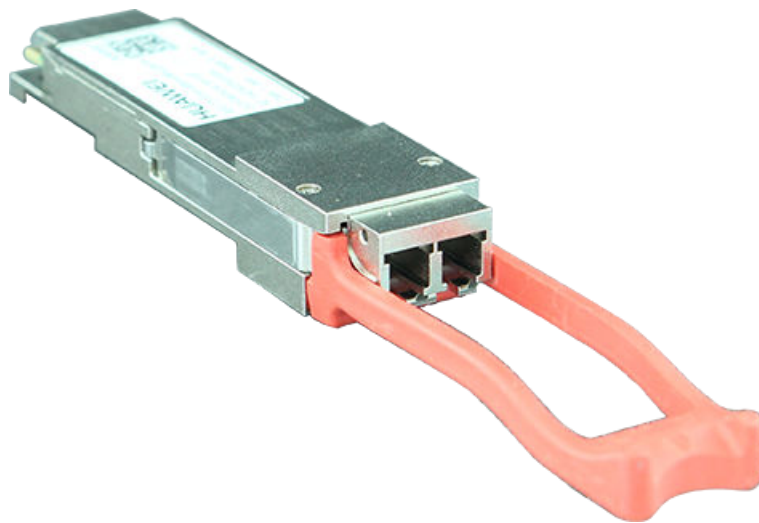
**Figure 10-5** shows the appearance of an SFP28 optical module.

**Figure 10-5** SFP28 optical module

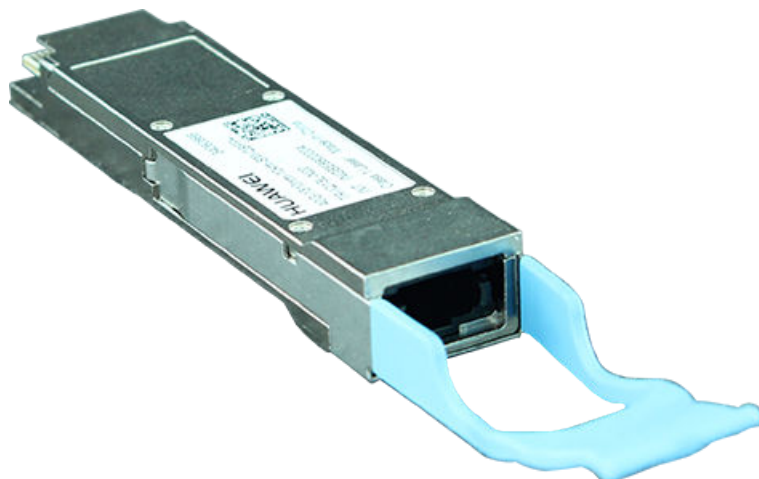


**Figure 10-6** and **Figure 10-7** show the appearance of a QSFP+ optical module.

**Figure 10-6** Appearance of a QSFP+ optical module (for LC optical fibers)



**Figure 10-7** Appearance of a QSFP+ optical module (for MPO optical fibers)



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**NOTICE**

The side with an L-shaped notch close to the connector is the top of a QSFP+ optical module, as shown in [Figure 10-6](#). When connecting a QSFP+ optical module to a port, keep the top side upward. Do not insert the QSFP+ optical module upside down.

Currently, there is no formal standard for 40G Ethernet. Therefore, a device may not display complete diagnostic information about 40GE optical modules. This is an acceptable fact in the telecommunications industry and does not affect functions of 40GE optical modules.

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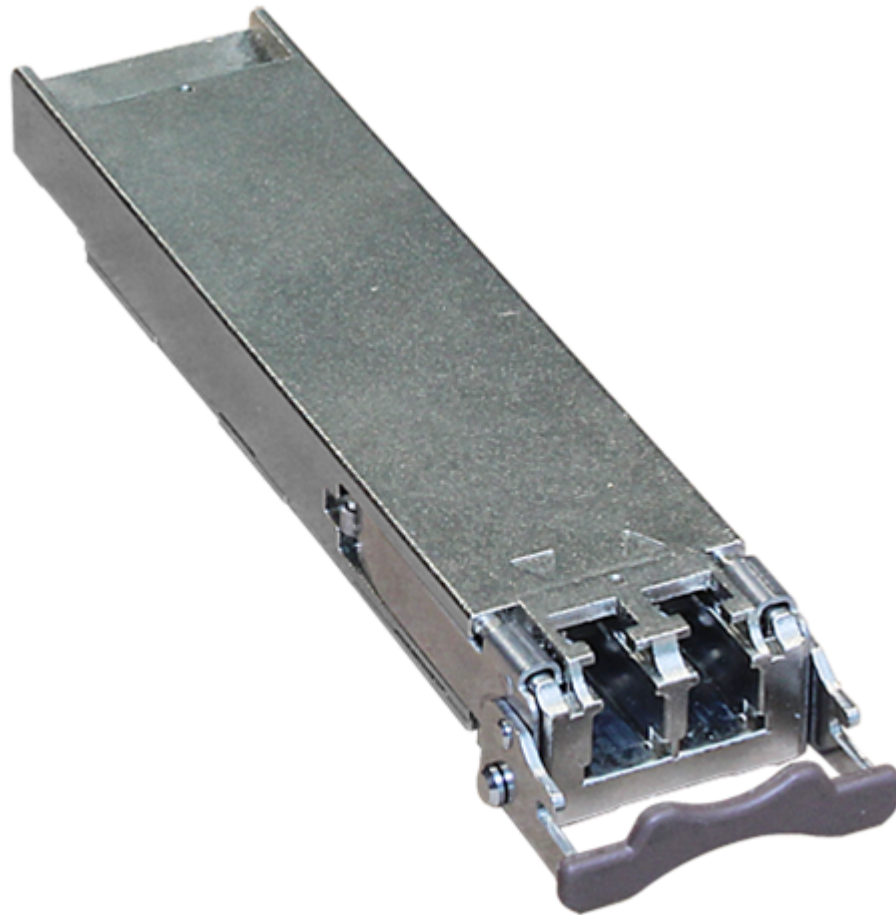
[Figure 10-8](#) shows the appearance of a CSFP optical module.

**Figure 10-8** Appearance of a CSFP optical module



[Figure 10-9](#) shows the appearance of an XFP module.

**Figure 10-9** Appearance of an XFP optical module

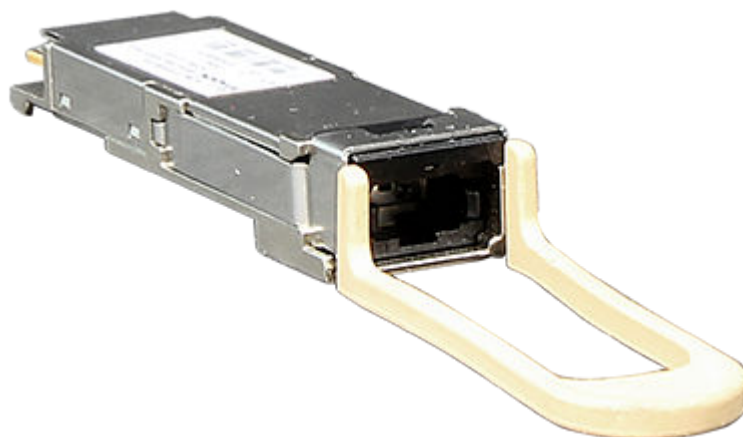


**NOTE**

The SFP+ and XFP optical modules are 10GE hot-swappable optical modules. Compared with the SFP+ optical modules, the XFP optical modules have a larger caliber.

**Figure 10-10** and **Figure 10-11** show the appearance of a QSFP28 optical module.

**Figure 10-10** Appearance of a QSFP28 optical module (for MPO optical fibers)



**Figure 10-11** Appearance of a QSFP28 optical module (for LC optical fibers)



## 10.2.2 Types of Optical Modules

Optical modules are available in various types to meet diversified requirements.

- **Classified by transmission rates**

Depending on transmission rates, optical modules are classified into 100GE, 40GE, 25GE, 10GE, FE, and GE optical modules.

- **Classified by encapsulation types**

The higher transmission rate an optical module provides, the more complex structure it has. Optical modules are encapsulated in different modes to provide different structures. Huawei S series devices support optical modules of the following encapsulation types: CFP, QSFP+, QSFP28, XFP, SFP, eSFP, and SFP+. All optical modules are hot swappable.

- SFP: small form-factor pluggable. SFP optical modules support LC fiber connectors.
- eSFP: enhanced small form-factor pluggable. An eSFP module is an SFP module that supports monitoring of voltage, temperature, bias current, transmit optical power, and receive optical power. Therefore, eSFP is also called SFP sometimes.
- SFP+: small form-factor pluggable plus, SFP with a higher rate.
- XFP: 10 Gigabit small form-factor pluggable. X is the Roman numeral 10, meaning that all XFP optical modules provide a 10 Gbit/s transmission rate. XFP optical modules support LC fiber connectors. They are wider and longer than SFP+ optical modules.
- SFP28: with the same interface size as an SFP+ module. An SFP28 interface can use a 25GE SFP28 optical module.
- QSFP+: quad small form-factor pluggable. QSFP+ optical modules support MPO fiber connectors and are larger than SFP+ optical modules.

- CFP: centum form-factor pluggable. The dimensions of a CFP optical module are 144.75 mm x 82 mm x 13.6 mm (L x W x H). CFP is a new optical module standard that can be used in data communication and telecommunications fields.
- QSFP28: with the same interface size as a QSFP+ module. A QSFP28 interface can use a 100GE QSFP28 optical module or a 40GE QSFP+ optical module.
- **Classified by physical layer standards**

Different physical layer standards are defined to allow data transmission in different modes. Therefore, different types of optical modules are produced to comply with these standards. For details, see **Standards compliance** of the specific optical module.
- **Classified by modes**

Optical fibers are classified into single-mode and multimode fibers. Therefore, optical modules are also classified into single-mode and multimode modules to support different optical fibers.

  - Single-mode optical modules are used with single-mode fibers. Single-mode fibers support a wide band and large transmission capacity, and are used for long-distance transmission.
  - Multimode optical modules are used with multimode fibers. Multimode fibers have lower transmission performance than single-mode fibers because of modal dispersion, but their costs are also lower. They are used for small-capacity, short-distance transmission.

Wavelength division multiplexing modules differ from other optical modules in center wavelengths. A common optical module has a center wavelength of 850 nm, 1310 nm, or 1550 nm, whereas a wavelength division multiplexing module transmits lights with different center wavelengths. Wavelength division multiplexing modules are classified into two types: coarse wavelength division multiplexing (CWDM) and dense wavelength division multiplexing (DWDM). Within the same band, DWDM modules are available in more types and use wavelength resources more efficiently than CWDM modules. DWDM and CWDM modules allow lights with different center wavelengths to be transmitted on one fiber without interfering each other. Therefore, a passive multiplexer can be used to combine the lights into one channel, which is then split into multiple channels by a demultiplexer on the remote end. This reduces the optical fibers required. DWDM and CWDM modules are used for long-distance transmission.

The transmit power of a long-distance optical module is often larger than its overload power. Therefore, when using such optical modules, select optical fibers of an appropriate length to ensure that the actual receive power is smaller than the overload power. If the optical fibers connected to a long-distance optical module are too short, use an optical attenuator to reduce the receive power on the remote optical module. Otherwise, the remote optical module may be burnt. Generally, an optical attenuator is required if an optical module supporting a transmission distance longer than 10 km is used together with short optical fibers.

## 10.2.3 Parameter Description

<b>Transmit optical power</b>	Output optical power of an optical module when it is working properly. When two optical modules are connected, the transmit optical power of one end must be within the range of receive optical power on the other end.
<b>Receive optical power</b>	Average input optical power that the receiver of an optical module can receive within a range of bit error rate (BER = $10^{-12}$ ). The upper limit of this parameter is the overload optical power and the lower limit is the maximum receiver sensitivity. When two optical modules are connected, the receive optical power on one end determines the range of transmit optical power on the other end.
<b>Maximum receiver sensitivity</b>	Minimum average input optical power that the receiver of an optical module can receive within a range of bit error rate (BER = $10^{-12}$ ). When two optical modules are connected, the maximum receiver sensitivity on one end determines the minimum value of transmit optical power on the other end.
<b>Overload optical power</b>	Maximum average input optical power that the receiver of an optical module can receive within a range of bit error rate (BER = $10^{-12}$ ). When two optical modules are connected, the overload optical power on one end determines the maximum transmit optical power on the other end.
<b>Extinction ratio</b>	Minimum ratio of the average optical power with signals transmitted against the average optical power without signals transmitted in complete modulation mode. The extinction ratio indicates the capability of an optical module to identify signal 0 and signal 1. This parameter is a quality indicator for optical modules. Optical modules with a large extinction ratio may not have good quality. Qualified optical modules should have an extinction ratio complying with IEEE 802.3.
<b>Fiber mode</b>	Mode of optical fibers defined based on core diameters and features of optical fibers. Optical fibers are classified into single-mode and multimode fibers. Generally, multimode fibers have large core diameters and severe dispersion, so they transmit optical signals over short distances. Single-mode fibers have low dispersion and can transmit optical signals over long distances.
<b>Modal bandwidth</b>	Bandwidth measured at a point with transmit power several dB lower than that of the point with the peak center wavelength. Modal bandwidth reflects spectrum characteristics of multimode fibers. The higher modal bandwidth a multimode fiber has, the longer transmission distance the fiber supports.
<b>Fiber diameter</b>	Diameter of the core of a fiber. According to international standards for optical fibers, the diameter of a multimode fiber is 62.5 $\mu\text{m}$ or 50 $\mu\text{m}$ , and the diameter of a single-mode fiber is 9 $\mu\text{m}$ . Select optical fibers with diameters supported by the optical modules.



<b>Fiber class</b>	Optical signals with different wavelengths have their best working windows in different optical fibers. To help efficiently adjust wavelengths or dispersion features of optical fibers and change their refractive indexes, the following fiber classes are defined: multimode fiber (G.651), common single-mode fiber (G.652), shifted dispersion fiber (G.653), and non-zero shifted dispersion fiber (G.655). G.651 and G.652 are commonly used fiber classes. Optical fibers of higher classes support longer transmission distances. When selecting optical fibers for optical modules, determine the classes of fibers based on the required transmission distances.
<b>Connector type</b>	Type of the interface on an optical module to accommodate a fiber. Commonly used connector types are LC (applicable to all the SFP, SFP+, and XFP modules), SC, and MPO (applicable to 150 m QSFP+ and CXP modules). Select optical fibers with connectors supported by the optical modules.
<b>Transmission distance</b>	Maximum distance over which optical signals can transmit. Optical signals sent from different types of sources can transmit over different distances due to negative effects of optical fibers, such as dispersion and attenuation. When connecting optical interfaces, select optical modules and fibers based on the maximum signal transmission distance.
<b>Interface rate</b>	Maximum rate of electrical signals that an optical component can transmit without bit errors. The interface rates defined in Ethernet standards include 125 Mbit/s, 1.25 Gbit/s, 10.3125 Gbit/s, and 41.25 Gbit/s. When connecting optical interfaces, select optical modules and fibers based on the maximum signal transmission rate.
<b>Center wavelength</b>	Wavelength measured at the midpoint of the half-amplitude line in the transmit spectrum. Two connected optical modules must have the same center wavelength.
<b>MSA</b>	Multi-Source Agreement, a non-profit organization jointly established by optical module manufacturers. This agreement defines the structure and dimensions of optical transceivers by referring to Optical Internetworking Forum (OIF) and International Telecommunication Union (ITU) standards.

## 10.2.4 How to View Optical Module Parameters

### Viewing the Hardware Description

If you know the model or type of an optical module, you can view the section "Pluggable Modules for Interfaces" in the *Hardware Description* to look up parameters of the optical module, including the center wavelength, transmission distance, fiber types supported, receive optical power, and transmit optical power.

### Using a Command

If an optical module is installed in a running device, you can run the **display transceiver** command to view parameters of the optical module, including the center wavelength, transmission distance, fiber types supported, receive optical power, and transmit optical power.



## 10.2.5 Rules for Optical Module Interoperation

### Interoperation Rules

Optical modules with the same standards can interoperate with each other. The standards define the rate, wavelength, and transmission distance of optical modules, but not their encapsulation modes (two interoperated optical modules can have different encapsulation modes).

If you need to achieve interoperability between optical modules with different standards, contact technical support personnel.

When S series devices are connected to other products such as routers, comply with the preceding optical module interoperation rules.

### Standards Description

The following describes the standards, using 1000BASE-LX10 as an example:

- 1000 indicates the rate (1000 Mbit/s, in this case). Other rates include 10 Mbit/s, 100 Mbit/s, 10 Gbit/s, 40 Gbit/s, and 100 Gbit/s.
- BASE indicates baseband transmission.
- L represents a center wavelength of the laser. Currently, the following center wavelengths are available: S (short wavelength: 850 nm), L (long wavelength: 1310 nm), E (extra long wavelength: 1550 nm), and B (single-fiber bidirectional long wavelength).
- X represents the encoding format. The encoding formats include T (twisted pair), X (8B/10B), R (64B/66B), and W (WIS).
- 10 indicates the number of channels. Currently, the value can be 4 or 10. If there is no number, the value is 1.

#### NOTE

This example provides the definitions in IEEE standards, which are not applicable to all optical modules, for example, non-standard optical modules.

The following organizations or agreements define standards related to optical modules:

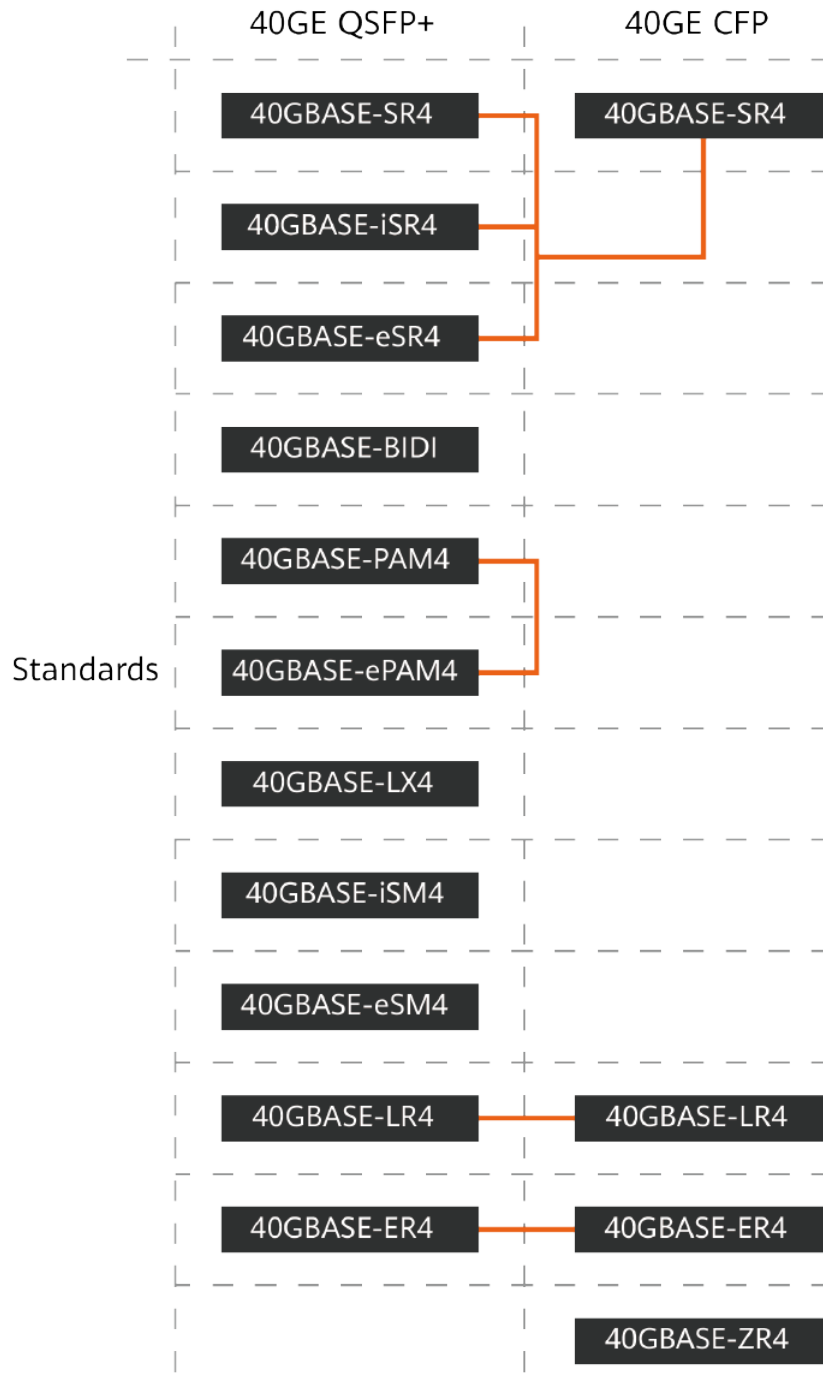
- IEEE 802.3, which defines MAC and PHY standards
- Small Form Factor (SFF) committee or Multi-Source Agreements (MSAs), which define optical module hardware, software, and structure standards

### Interoperability of 40GE and 100GE Optical Modules

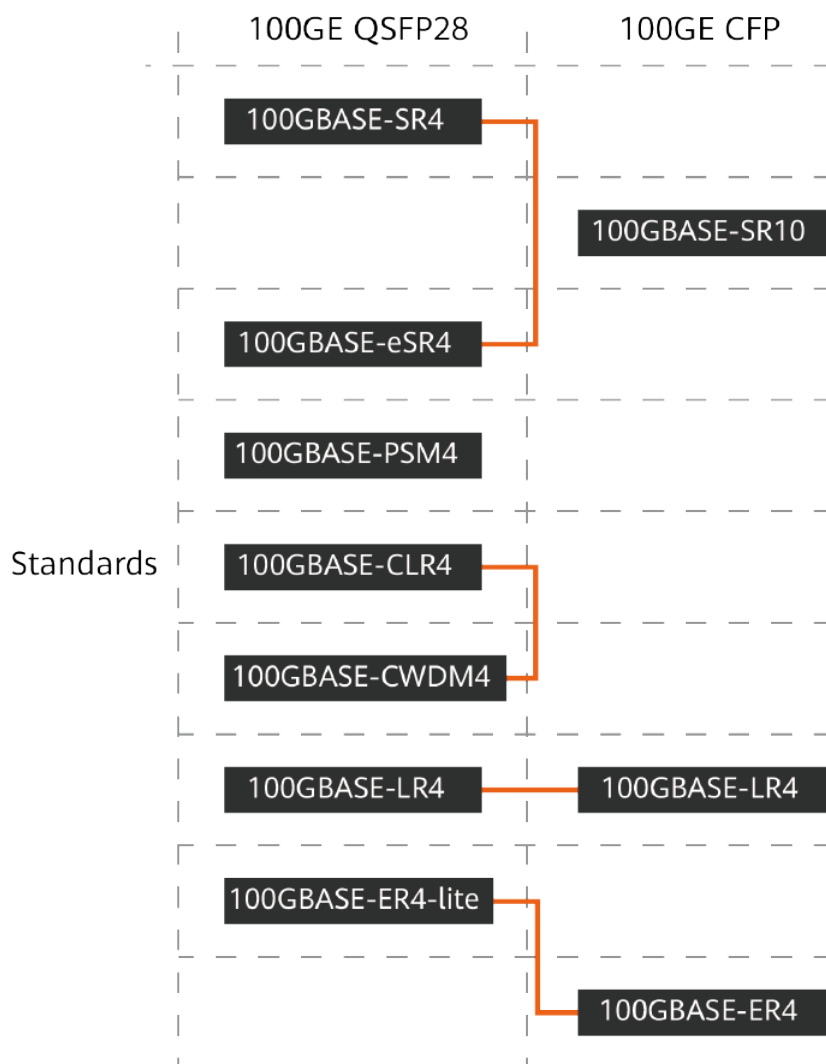
S series devices support the following types of 40GE and 100GE optical modules:

- 40GE QSFP+ optical modules
- 40GE CFP optical modules
- 100GE CFP optical modules
- 100GE QSFP28 optical modules

**Figure 10-12** Interoperability of 40GE optical modules in different encapsulation modes



**Figure 10-13** Interoperability of 100GE optical modules in different encapsulation modes



**NOTE**

Optical modules complying with the standards connected in the preceding figures can interoperate with each other.

iSR4 and eSR4 are non-standard formats derived from SR4, and support interoperation with SR4.

A 40GBASE-PAM4 optical module can interoperate with a 40GBASE-ePAM4 optical module.

A 100GBASE-CLR4 optical module can interoperate with a 100GBASE-CWDM4 optical module.

A 100GBASE-ER4-lite optical module can interoperate with a 100GBASE-ER4 optical module, at a maximum distance of 30 km.

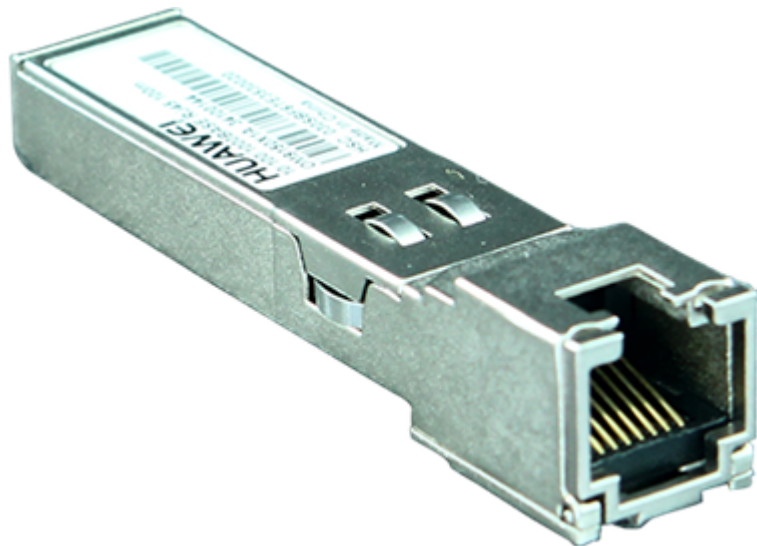
## 10.3 Understanding Copper Modules

Copper modules are also called RJ45 modules. Unlike optical modules, copper modules do not perform electrical-optical conversion. When two optical interfaces

have copper modules installed, the interfaces can be connected using a copper cable. Currently, Huawei offers only GE copper modules with RJ45 interfaces. GE copper modules work with Category 5 network cables, comply with 1000BASE-T (IEEE 802.3ab), and support a maximum transmission distance of 100 m.

**Figure 10-14** shows a GE SFP copper module.

**Figure 10-14** Appearance of a GE SFP copper module



## 10.4 FE SFP/eSFP Optical Modules

### 10.4.1 S-SFP-FE-LH40-SM1310

**Table 10-1** S-SFP-FE-LH40-SM1310 specifications

Item	Value
<b>Basic Information</b>	
Module name	S-SFP-FE-LH40-SM1310
Part Number	02317344
Model	S-SFP-FE-LH40-SM1310
Form factor	eSFP
Application standard	Non-standard
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported

Item	Value
Transmission rate [bit/s]	100 Mbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0 dBm
Minimum Tx optical power [dBm]	-5.0 dBm
Minimum extinction ratio [dB]	10.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-37.0 dBm
Overload power [dBm]	-10.0 dBm

## 10.4.2 S-SFP-FE-LH80-SM1550

**Table 10-2** S-SFP-FE-LH80-SM1550 specifications

Item	Value
<b>Basic Information</b>	
Module name	S-SFP-FE-LH80-SM1550
Part Number	02317345
Model	S-SFP-FE-LH80-SM1550
Form factor	eSFP
Application standard	Non-standard
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	100 Mbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1550 nm
Maximum Tx optical power [dBm]	0 dBm

Item	Value
Minimum Tx optical power [dBm]	-5.0 dBm
Minimum extinction ratio [dB]	10.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-37.0 dBm
Overload power [dBm]	-10.0 dBm

### 10.4.3 SFP-FE-LX-SM1310-BIDI

Table 10-3 SFP-FE-LX-SM1310-BIDI specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-FE-LX-SM1310-BIDI
Part Number	02315203
Model	SFP-FE-LX-SM1310-BIDI
Form factor	eSFP
Application standard	100BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	100 Mbit/s
Target transmission distance [km]	Single-mode fiber: 15 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1550 nm (RX) 1310 nm (TX)
Maximum Tx optical power [dBm]	-8.0 dBm
Minimum Tx optical power [dBm]	-15.0 dBm
Minimum extinction ratio [dB]	8.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-32.0 dBm

Item	Value
Overload power [dBm]	-8.0 dBm
<b>NOTE</b> Supports the single-fiber bidirectional function. BIDI optical modules must be used in pairs. For example, SFP-FE-LX-SM1310-BIDI must be used with SFP-FE-LX-SM1550-BIDI.	

## 10.4.4 SFP-FE-LX-SM1550-BIDI

**Table 10-4** SFP-FE-LX-SM1550-BIDI specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-FE-LX-SM1550-BIDI
Part Number	02315202
Model	SFP-FE-LX-SM1550-BIDI
Form factor	eSFP
Application standard	100BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	100 Mbit/s
Target transmission distance [km]	Single-mode fiber: 15 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm (RX) 1550 nm (TX)
Maximum Tx optical power [dBm]	-8.0 dBm
Minimum Tx optical power [dBm]	-15.0 dBm
Minimum extinction ratio [dB]	8.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-32.0 dBm
Overload power [dBm]	-8.0 dBm

Item	Value
<b>NOTE</b>	
Supports the single-fiber bidirectional function.	
BIDI optical modules must be used in pairs. For example, SFP-FE-LX-SM1550-BIDI must be used with SFP-FE-LX-SM1310-BIDI.	

## 10.4.5 SFP-FE-SX-MM1310

**Table 10-5** SFP-FE-SX-MM1310 specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-FE-SX-MM1310
Part Number	02315233
Model	SFP-FE-SX-MM1310
Form factor	SFP
Application standard	100BASE-FX
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Not supported
Transmission rate [bit/s]	100 Mbit/s
Target transmission distance [km]	Multimode fiber (50 μm or 62.5 μm diameter): 2 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	-14.0 dBm
Minimum Tx optical power [dBm]	-19.0 dBm
Minimum extinction ratio [dB]	10 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-30.0 dBm
Overload power [dBm]	-14.0 dBm



## 10.4.6 eSFP-FE-LX-SM1310

**Table 10-6** eSFP-FE-LX-SM1310 specifications

Item	Value
<b>Basic Information</b>	
Module name	eSFP-FE-LX-SM1310
Part Number	02315205
Model	eSFP-FE-LX-SM1310
Form factor	eSFP
Application standard	Non-standard
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	100 Mbit/s
Target transmission distance [km]	Single-mode fiber: 15 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	-8.0 dBm
Minimum Tx optical power [dBm]	-15.0 dBm
Minimum extinction ratio [dB]	8.2 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-8.0 dBm

## 10.5 GE eSFP Optical Modules

## 10.5.1 LE2MGSC40DE0

**Table 10-7** LE2MGSC40DE0 specifications

Item	Value
<b>Basic Information</b>	
Module name	LE2MGSC40DE0
Part Number	02310KVV
Model	LE2MGSC40DE0
Form factor	eSFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1490 nm (RX) 1310 nm (TX)
Maximum Tx optical power [dBm]	3.0 dBm
Minimum Tx optical power [dBm]	-2.0 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-23 dBm
Overload power [dBm]	-3.0 dBm
<b>NOTE</b> Supports the single-wire bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, LE2MGSC40DE0 must be used with LE2MGSC40ED0.	

## 10.5.2 LE2MGSC40ED0

**Table 10-8** LE2MGSC40ED0 specifications

Item	Value
<b>Basic Information</b>	
Module name	LE2MGSC40ED0
Part Number	02310KVU
Model	LE2MGSC40ED0
Form factor	eSFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm (RX) 1490 nm (TX)
Maximum Tx optical power [dBm]	3.0 dBm
Minimum Tx optical power [dBm]	-2.0 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-23 dBm
Overload power [dBm]	-3.0 dBm
<b>NOTE</b> Supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, LE2MGSC40ED0 must be used with LE2MGSC40DE0.	

### 10.5.3 S-SFP-GE-LH40-SM1310

**Table 10-9** S-SFP-GE-LH40-SM1310 specifications

Item	Value
<b>Basic Information</b>	
Module name	S-SFP-GE-LH40-SM1310
Part Number	02317346
Model	S-SFP-GE-LH40-SM1310
Form factor	eSFP
Application standard	1000BASE-EX (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0 dBm
Minimum Tx optical power [dBm]	-5.0 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-23 dBm
Overload power [dBm]	-3.0 dBm

### 10.5.4 S-SFP-GE-LH40-SM1550

**Table 10-10** S-SFP-GE-LH40-SM1550 specifications

Item	Value
<b>Basic Information</b>	
Module name	S-SFP-GE-LH40-SM1550

Item	Value
Part Number	02317347
Model	S-SFP-GE-LH40-SM1550
Form factor	eSFP
Application standard	Non-standard
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1550 nm
Maximum Tx optical power [dBm]	0 dBm
Minimum Tx optical power [dBm]	-5.0 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-22 dBm
Overload power [dBm]	-3.0 dBm

## 10.5.5 S-SFP-GE-LH80-SM1550

**Table 10-11** S-SFP-GE-LH80-SM1550 specifications

Item	Value
<b>Basic Information</b>	
Module name	S-SFP-GE-LH80-SM1550
Part Number	02317348
Model	S-SFP-GE-LH80-SM1550
Form factor	eSFP
Application standard	1000BASE-ZX
Connector type	LC

Item	Value
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1550 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	-2.0 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-23 dBm
Overload power [dBm]	-3.0 dBm

## 10.5.6 SFP-GE-BXU1-SC

Table 10-12 SFP-GE-BXU1-SC specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-BXU1-SC
Part Number	02310TQH
Model	SFP-GE-BXU1-SC
Form factor	eSFP
Application standard	Non-standard
Connector type	SC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km

Item	Value
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm (RX) 1490 nm (TX)
Maximum Tx optical power [dBm]	-3.0 dBm
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-19.5 dBm
Overload power [dBm]	-3.0 dBm
<b>NOTE</b> This module supports the single-fiber bidirectional function.	

## 10.5.7 SFP-GE-EX-C

**Table 10-13** SFP-GE-EX-C specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-EX-C
Part Number	02312UUD
Model	SFP-GE-EX-C
Form factor	eSFP
Application standard	1000BASE-EX (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0 dBm

Item	Value
Minimum Tx optical power [dBm]	-5.0 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-23 dBm
Overload power [dBm]	-3.0 dBm

## 10.5.8 SFP-GE-LX-SM1310 (02315200)

**Table 10-14** SFP-GE-LX-SM1310 specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-LX-SM1310
Part Number	02315200
Model	SFP-GE-LX-SM1310
Form factor	eSFP
Application standard	1000BASE-LX10/LH
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	-3.0 dBm
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-20.0 dBm
Overload power [dBm]	-3.0 dBm



## 10.5.9 SFP-GE-LX-SM1310-BIDI (02315285)

**Table 10-15** SFP-GE-LX-SM1310-BIDI specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-LX-SM1310-BIDI
Part Number	02315285
Model	SFP-GE-LX-SM1310-BIDI
Form factor	eSFP
Application standard	1000BASE-BX10
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1490 nm (RX) 1310 nm (TX)
Maximum Tx optical power [dBm]	-3.0 dBm
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	6 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-19.5 dBm
Overload power [dBm]	-3.0 dBm
<b>NOTE</b> Supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-LX-SM1310-BIDI must be used with SFP-GE-LX-SM1490-BIDI.	

## 10.5.10 SFP-GE-LX-SM1490-BIDI (02315286)

**Table 10-16** SFP-GE-LX-SM1490-BIDI specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-LX-SM1490-BIDI
Part Number	02315286
Model	SFP-GE-LX-SM1490-BIDI
Form factor	eSFP
Application standard	1000BASE-BX10
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm (RX) 1490 nm (TX)
Maximum Tx optical power [dBm]	-3.0 dBm
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	6 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-19.5 dBm
Overload power [dBm]	-3.0 dBm
<b>NOTE</b> Supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-LX-SM1490-BIDI must be used with SFP-GE-LX-SM1310-BIDI.	

## 10.5.11 SFP-GE-LX10-C

**Table 10-17** SFP-GE-LX10-C specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-LX10-C
Part Number	02312UUC
Model	SFP-GE-LX10-C
Form factor	eSFP
Application standard	1000BASE-LX10/LH
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	-3.0 dBm
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-20.0 dBm
Overload power [dBm]	-3.0 dBm

## 10.5.12 SFP-GE-SX-C (02312UUB)

**Table 10-18** SFP-GE-SX-C specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-SX-C

Item	Value
Part Number	02312UUB
Model	SFP-GE-SX-C
Form factor	eSFP
Application standard	1000BASE-SX
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	-20°C to +85°C (-4°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Multimode optical fiber (modal bandwidth: 160 MHz*km; diameter: 62.5 μm): 0.22 km Multimode optical fiber (OM1): 0.275 km Multimode optical fiber (modal bandwidth: 400 MHz*km; diameter: 50 μm): 0.5 km Multimode optical fiber (OM2): 0.55 km Multimode optical fiber (OM3): 1 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	-2.5 dBm
Minimum Tx optical power [dBm]	-9.5 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-17.0 dBm
Overload power [dBm]	0 dBm

## 10.5.13 SFP-GE-ZBXD1

**Table 10-19** SFP-GE-ZBXD1 specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-ZBXD1
Part Number	02311DDB
Model	SFP-GE-ZBXD1
Form factor	eSFP
Application standard	Non-standard
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1490 nm (RX) 1570 nm (TX)
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	-2.0 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-26 dBm
Overload power [dBm]	-3.0 dBm
<b>NOTE</b> Single-fiber bidirectional transmission is supported. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-ZBXD1 must be used with SFP-GE-ZBXU1.	

**NOTE**

This module can only be used on a device running V200R008C00 or a later version. A device running a version earlier than V200R008C00 may fail to obtain information about this module.

## 10.5.14 SFP-GE-ZBXU1

**Table 10-20** SFP-GE-ZBXU1 specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-ZBXU1
Part Number	02311DDC
Model	SFP-GE-ZBXU1
Form factor	eSFP
Application standard	Non-standard
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1570 nm (RX) 1490 nm (TX)
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	-2.0 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-26 dBm
Overload power [dBm]	-3.0 dBm
<p><b>NOTE</b> Single-fiber bidirectional transmission is supported. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-ZBXU1 must be used with SFP-GE-ZBXD1.</p>	

 **NOTE**

This module can only be used on a device running V200R008C00 or a later version. A device running a version earlier than V200R008C00 may fail to obtain information about this module.

## 10.5.15 eSFP-GE-SX-MM850 (02315204)

**Table 10-21** eSFP-GE-SX-MM850 specifications

Item	Value
<b>Basic Information</b>	
Module name	eSFP-GE-SX-MM850
Part Number	02315204
Model	eSFP-GE-SX-MM850
Form factor	eSFP
Application standard	1000BASE-SX
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	-20°C to +85°C (-4°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Multimode optical fiber (modal bandwidth: 160 MHz*km; diameter: 62.5 μm): 0.22 km Multimode optical fiber (OM1): 0.275 km Multimode optical fiber (modal bandwidth: 400 MHz*km; diameter: 50 μm): 0.5 km Multimode optical fiber (OM2): 0.55 km Multimode optical fiber (OM3): 1 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	-2.5 dBm
Minimum Tx optical power [dBm]	-9.5 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-17.0 dBm
Overload power [dBm]	0 dBm

## 10.5.16 eSFP-GE-ZX100-SM1550

**Table 10-22** eSFP-GE-ZX100-SM1550 specifications

Item	Value
<b>Basic Information</b>	
Module name	eSFP-GE-ZX100-SM1550
Part Number	02315206
Model	eSFP-GE-ZX100-SM1550
Form factor	eSFP
Application standard	1000BASE-ZX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 100 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1550 nm
Maximum Tx optical power [dBm]	5 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	9.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-30.0 dBm
Overload power [dBm]	-9.0 dBm

## 10.5.17 OGSC10DD0

**Table 10-23** OGSC10DD0 specifications

Item	Value
<b>Basic Information</b>	
Module name	OGSC10DD0



Item	Value
Part Number	02310LJH
Model	OGSC10DD0
Form factor	eSFP
Application standard	1000BASE-LX10/LH
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	-3.0 dBm
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	9.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-19 dBm
Overload power [dBm]	-3.0 dBm

## 10.5.18 OGSC40DD0

**Table 10-24** OGSC40DD0 specifications

Item	Value
<b>Basic Information</b>	
Module name	OGSC40DD0
Part Number	02310LJJ
Model	OGSC40DD0
Form factor	eSFP
Application standard	Non-standard
Connector type	LC

Item	Value
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0 dBm
Minimum Tx optical power [dBm]	-5.0 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-22.5 dBm
Overload power [dBm]	-3.0 dBm

## 10.5.19 OGSM01880

**Table 10-25** OGSM01880 specifications

Item	Value
<b>Basic Information</b>	
Module name	OGSM01880
Part Number	02310LJG
Model	OGSM01880
Form factor	eSFP
Application standard	1000BASE-SX
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s

Item	Value
Target transmission distance [km]	Multimode fiber (with modal bandwidth of 160 MHz*km and diameter of 62.5 μm): 0.22 km Multimode fiber (OM1): 0.275 km Multimode fiber (with modal bandwidth of 400 MHz*km and diameter of 50 μm): 0.5 km Multimode fiber (OM2): 0.55 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	-2.5 dBm
Minimum Tx optical power [dBm]	-10 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-17.0 dBm
Overload power [dBm]	0 dBm

## 10.5.20 SFP-GE-BX-D1-I

Table 10-26 SFP-GE-BX-D1-I specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-BX-D1-I
Part Number	02311DMA
Model	SFP-GE-BX-D1-I
Form factor	SFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s

Item	Value
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm (RX) 1490 nm (TX)
Maximum Tx optical power [dBm]	-3 dBm
Minimum Tx optical power [dBm]	-9 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-19.5 dBm
Overload power [dBm]	-3 dBm
<b>NOTE</b> Supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-BX-D1-I must be used with SFP-GE-BX-U1-I.	

 **NOTE**

This module can only be used on a switch running V200R012C00 or a later version.

## 10.5.21 SFP-GE-BX-U1-I

**Table 10-27** SFP-GE-BX-U1-I specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-BX-U1-I
Part Number	02311DMF
Model	SFP-GE-BX-U1-I
Form factor	SFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported

Item	Value
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1490 nm (RX) 1310 nm (TX)
Maximum Tx optical power [dBm]	-3 dBm
Minimum Tx optical power [dBm]	-9 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-19.5 dBm
Overload power [dBm]	-3 dBm
<b>NOTE</b> Supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-BX-D1-I must be used with SFP-GE-BX-U1-I.	

 **NOTE**

This module can only be used on a switch running V200R012C00 or a later version.

## 10.5.22 SFP-GE-BX40-D-I

**Table 10-28** SFP-GE-BX40-D-I specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-BX40-D-I
Part Number	02312TMC
Model	SFP-GE-BX40-D-I
Form factor	SFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)

Item	Value
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm (RX) 1490 nm (TX)
Maximum Tx optical power [dBm]	6.5 dBm
Minimum Tx optical power [dBm]	1.5 dBm
Minimum extinction ratio [dB]	8.2 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-26 dBm
Overload power [dBm]	-7 dBm
<b>NOTE</b> Supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-BX40-D-I must be used with SFP-GE-BX40-U-I.	

 **NOTE**

This module can only be used on a switch running V200R019C00 or a later version.

## 10.5.23 SFP-GE-BX40-U-I

**Table 10-29** SFP-GE-BX40-U-I specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-BX40-U-I
Part Number	02312TMB
Model	SFP-GE-BX40-U-I
Form factor	SFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF

Item	Value
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1490 nm (RX) 1310 nm (TX)
Maximum Tx optical power [dBm]	6.5 dBm
Minimum Tx optical power [dBm]	1.5 dBm
Minimum extinction ratio [dB]	8.2 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-26 dBm
Overload power [dBm]	-7 dBm
<b>NOTE</b> Supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-BX40-U-I must be used with SFP-GE-BX40-D-I.	

 **NOTE**

This module can only be used on a switch running V200R019C00 or a later version.

## 10.5.24 eSFP-GE-SX-MM850 (02313URD)

**Table 10-30** eSFP-GE-SX-MM850 specifications

Item	Value
<b>Basic Information</b>	
Module name	eSFP-GE-SX-MM850
Part Number	02313URD
Model	eSFP-GE-SX-MM850
Form factor	eSFP
Application standard	1000BASE-SX
Connector type	LC

Item	Value
Optical fiber type	MMF
Working case temperature [°C(°F)]	-20°C to +85°C (-4°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Multimode optical fiber (modal bandwidth: 160 MHz*km; diameter: 62.5 μm): 0.22 km Multimode optical fiber (OM1): 0.275 km Multimode optical fiber (modal bandwidth: 400 MHz*km; diameter: 50 μm): 0.5 km Multimode optical fiber (OM2): 0.55 km Multimode optical fiber (OM3): 1 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	-2.5 dBm
Minimum Tx optical power [dBm]	-9.5 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-17.0 dBm
Overload power [dBm]	0 dBm

## 10.5.25 SFP-GE-LX-SM1310 (02313URF)

Table 10-31 SFP-GE-LX-SM1310 specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-LX-SM1310
Part Number	02313URF
Model	SFP-GE-LX-SM1310
Form factor	eSFP



Item	Value
Application standard	1000BASE-LX10/LH
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	-3.0 dBm
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-20.0 dBm
Overload power [dBm]	-3.0 dBm

## 10.5.26 SFP-GE-SX-C (02314KKF)

Table 10-32 SFP-GE-SX-C specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-SX-C
Part Number	02314KKF
Model	SFP-GE-SX-C
Form factor	eSFP
Application standard	1000BASE-SX
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	-20°C to +85°C (-4°F to +185°F)
DDM options	Supported

Item	Value
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Multimode optical fiber (modal bandwidth: 160 MHz*km; diameter: 62.5 μm): 0.22 km Multimode optical fiber (OM1): 0.275 km Multimode optical fiber (modal bandwidth: 400 MHz*km; diameter: 50 μm): 0.5 km Multimode optical fiber (OM2): 0.55 km Multimode optical fiber (OM3): 1 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	-2.5 dBm
Minimum Tx optical power [dBm]	-9.5 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-17.0 dBm
Overload power [dBm]	0 dBm

## 10.5.27 SFP-GE-LX-SM1310-BIDI (02314KKJ)

**Table 10-33** SFP-GE-LX-SM1310-BIDI specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-LX-SM1310-BIDI
Part Number	02314KKJ
Model	SFP-GE-LX-SM1310-BIDI
Form factor	eSFP
Application standard	1000BASE-BX10
Connector type	LC
Optical fiber type	SMF

Item	Value
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1490 nm (RX) 1310 nm (TX)
Maximum Tx optical power [dBm]	-3.0 dBm
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	6 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-19.5 dBm
Overload power [dBm]	-3.0 dBm
<b>NOTE</b> Supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-LX-SM1310-BIDI must be used with SFP-GE-LX-SM1490-BIDI.	

## 10.5.28 SFP-GE-LX-SM1490-BIDI (02314KKH)

Table 10-34 SFP-GE-LX-SM1490-BIDI specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-LX-SM1490-BIDI
Part Number	02314KKH
Model	SFP-GE-LX-SM1490-BIDI
Form factor	eSFP
Application standard	1000BASE-BX10
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)

Item	Value
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm (RX) 1490 nm (TX)
Maximum Tx optical power [dBm]	-3.0 dBm
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	6 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-19.5 dBm
Overload power [dBm]	-3.0 dBm
<b>NOTE</b> Supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-LX-SM1490-BIDI must be used with SFP-GE-LX-SM1310-BIDI.	

## 10.6 GE CSFP Optical Modules

### 10.6.1 CSFP-GE-FE-BIDI2

Table 10-35 CSFP-GE-FE-BIDI2 specifications

Item	Value
<b>Basic Information</b>	
Module name	CSFP-GE-FE-BIDI2
Part Number	02310WRR
Model	CSFP-GE-FE-BIDI2
Form factor	CSFP
Application standard	Non-standard
Connector type	LC
Optical fiber type	SMF

Item	Value
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	100 Mbit/s 1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 20 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm (RX) 1490 nm (TX)
Maximum Tx optical power [dBm]	-3.0 dBm
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	6.6 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-23 dBm
Overload power [dBm]	-3.0 dBm
<b>NOTE</b> A CSFP optical module is incorrectly installed on an unsupported switch. As a result, you cannot check whether the optical module is in position.	

## 10.6.2 CSFP-GE-FE-BIDI4

**Table 10-36** CSFP-GE-FE-BIDI4 specifications

Item	Value
<b>Basic Information</b>	
Module name	CSFP-GE-FE-BIDI4
Part Number	02310XQV
Model	CSFP-GE-FE-BIDI4
Form factor	CSFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)

Item	Value
DDM options	Supported
Transmission rate [bit/s]	100 Mbit/s 1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm (RX) 1490 nm (TX)
Maximum Tx optical power [dBm]	0 dBm
Minimum Tx optical power [dBm]	-5.0 dBm
Minimum extinction ratio [dB]	6.6 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-25 dBm
Overload power [dBm]	0 dBm
<b>NOTE</b> A CSFP optical module is incorrectly installed on an unsupported switch. As a result, you cannot check whether the optical module is in position.	

### 10.6.3 CSFP-GE-FE-BXD1

**Table 10-37** CSFP-GE-FE-BXD1 specifications

Item	Value
<b>Basic Information</b>	
Module name	CSFP-GE-FE-BXD1
Part Number	02310TEE
Model	CSFP-GE-FE-BXD1
Form factor	CSFP
Application standard	1000BASE-BX10
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported

Item	Value
Transmission rate [bit/s]	100 Mbit/s 1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm (RX) 1490 nm (TX)
Maximum Tx optical power [dBm]	-3.0 dBm
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	6.6 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-23 dBm
Overload power [dBm]	-3.0 dBm
<b>NOTE</b> A CSFP optical module is incorrectly installed on an unsupported switch. As a result, you cannot check whether the optical module is in position.	

## 10.7 GE-CWDM eSFP Optical Modules

### 10.7.1 CWDM-SFPGE-1471

**Table 10-38** CWDM-SFPGE-1471 specifications

Item	Value
<b>Basic Information</b>	
Module name	CWDM-SFPGE-1471
Part Number	02310LPN
Model	CWDM-SFPGE-1471
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)

Item	Value
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1471 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

## 10.7.2 CWDM-SFPGE-1491

Table 10-39 CWDM-SFPGE-1491 specifications

Item	Value
<b>Basic Information</b>	
Module name	CWDM-SFPGE-1491
Part Number	02310LPK
Model	CWDM-SFPGE-1491
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1491 nm



Item	Value
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

### 10.7.3 CWDM-SFPGE-1511

**Table 10-40** CWDM-SFPGE-1511 specifications

Item	Value
<b>Basic Information</b>	
Module name	CWDM-SFPGE-1511
Part Number	02310LPH
Model	CWDM-SFPGE-1511
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1511 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-28.0 dBm

Item	Value
Overload power [dBm]	-9.0 dBm

## 10.7.4 CWDM-SFPGE-1531

Table 10-41 CWDM-SFPGE-1531 specifications

Item	Value
<b>Basic Information</b>	
Module name	CWDM-SFPGE-1531
Part Number	02310LPL
Model	CWDM-SFPGE-1531
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1531 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

## 10.7.5 CWDM-SFPGE-1551

**Table 10-42** CWDM-SFPGE-1551 specifications

Item	Value
<b>Basic Information</b>	
Module name	CWDM-SFPGE-1551
Part Number	02312AXN
Model	CWDM-SFPGE-1551
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1551 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

## 10.7.6 CWDM-SFPGE-1571

**Table 10-43** CWDM-SFPGE-1571 specifications

Item	Value
<b>Basic Information</b>	
Module name	CWDM-SFPGE-1571

Item	Value
Part Number	02312AXM
Model	CWDM-SFPGE-1571
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1571 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

## 10.7.7 CWDM-SFPGE-1591

**Table 10-44** CWDM-SFPGE-1591 specifications

Item	Value
<b>Basic Information</b>	
Module name	CWDM-SFPGE-1591
Part Number	02312AXK
Model	CWDM-SFPGE-1591
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC

Item	Value
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1591 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

## 10.7.8 CWDM-SFPGE-1611

Table 10-45 CWDM-SFPGE-1611 specifications

Item	Value
<b>Basic Information</b>	
Module name	CWDM-SFPGE-1611
Part Number	02310LPJ
Model	CWDM-SFPGE-1611
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km

Item	Value
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1611 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

## 10.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario)

### 10.8.1 CWDM-SFPGE-1271

**Table 10-46** CWDM-SFPGE-1271 specifications

Item	Value
<b>Basic Information</b>	
Module name	CWDM-SFPGE-1271
Part Number	02312AXC
Model	CWDM-SFPGE-1271
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-5°C to +75°C (23°F to 167°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1271 nm

Item	Value
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

## 10.8.2 CWDM-SFPGE-1291

**Table 10-47** CWDM-SFPGE-1291 specifications

Item	Value
<b>Basic Information</b>	
Module name	CWDM-SFPGE-1291
Part Number	02312AXB
Model	CWDM-SFPGE-1291
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-5°C to +75°C (23°F to 167°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1291 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-28.0 dBm

Item	Value
Overload power [dBm]	-9.0 dBm

### 10.8.3 CWDM-SFPGE-1311

**Table 10-48** CWDM-SFPGE-1311 specifications

Item	Value
<b>Basic Information</b>	
Module name	CWDM-SFPGE-1311
Part Number	02312AXA
Model	CWDM-SFPGE-1311
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-5°C to +75°C (23°F to 167°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1311 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm



## 10.8.4 CWDM-SFPGE-1331

**Table 10-49** CWDM-SFPGE-1331 specifications

Item	Value
<b>Basic Information</b>	
Module name	CWDM-SFPGE-1331
Part Number	02312AWY
Model	CWDM-SFPGE-1331
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-5°C to +75°C (23°F to 167°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1331 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

## 10.8.5 CWDM-SFPGE-1351

**Table 10-50** CWDM-SFPGE-1351 specifications

Item	Value
<b>Basic Information</b>	
Module name	CWDM-SFPGE-1351

Item	Value
Part Number	02312AWX
Model	CWDM-SFPGE-1351
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-5°C to +75°C (23°F to 167°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1351 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

## 10.8.6 CWDM-SFPGE-1371

**Table 10-51** CWDM-SFPGE-1371 specifications

Item	Value
<b>Basic Information</b>	
Module name	CWDM-SFPGE-1371
Part Number	02312AWW
Model	CWDM-SFPGE-1371
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC

Item	Value
Optical fiber type	SMF
Working case temperature [°C(°F)]	-5°C to +75°C (23°F to 167°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1371 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

## 10.8.7 CWDM-SFPGE-1391

Table 10-52 CWDM-SFPGE-1391 specifications

Item	Value
<b>Basic Information</b>	
Module name	CWDM-SFPGE-1391
Part Number	02312AWV
Model	CWDM-SFPGE-1391
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-5°C to +75°C (23°F to 167°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km

Item	Value
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1391 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

## 10.8.8 CWDM-SFPGE-1411

**Table 10-53** CWDM-SFPGE-1411 specifications

Item	Value
<b>Basic Information</b>	
Module name	CWDM-SFPGE-1411
Part Number	02312AWU
Model	CWDM-SFPGE-1411
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-5°C to +75°C (23°F to 167°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1411 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB

Item	Value
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

## 10.8.9 CWDM-SFPGE-1431

**Table 10-54** CWDM-SFPGE-1431 specifications

Item	Value
<b>Basic Information</b>	
Module name	CWDM-SFPGE-1431
Part Number	02312AWT
Model	CWDM-SFPGE-1431
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-5°C to +75°C (23°F to 167°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1431 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

## 10.8.10 CWDM-SFPGE-1451

**Table 10-55** CWDM-SFPGE-1451 specifications

Item	Value
<b>Basic Information</b>	
Module name	CWDM-SFPGE-1451
Part Number	02312AWS
Model	CWDM-SFPGE-1451
Form factor	eSFP
Application standard	GE-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-5°C to +75°C (23°F to 167°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1451 nm
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-9.0 dBm

## 10.9 GE-DWDM eSFP Optical Modules

## 10.9.1 DWDM-SFPGE-1560-61

**Table 10-56** DWDM-SFPGE-1560-61 specifications

Item	Value
<b>Basic Information</b>	
Module name	DWDM-SFPGE-1560-61
Part Number	02310LLE
Model	DWDM-SFPGE-1560-61
Form factor	eSFP
Application standard	GE-DWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 120 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1560.61 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.2 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-28.0 dBm
Overload power [dBm]	-8.0 dBm

## 10.10 GE SFP Copper Modules

## 10.10.1 SFP-1000BaseT (02314171)

**Table 10-57** SFP-1000BaseT specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-1000BaseT
Part Number	02314171
Model	SFP-1000BaseT
Form factor	SFP
Application standard	1000BASE-T
Connector type	RJ45
Optical fiber type	-
DDM options	Not supported
Transmission rate [bit/s]	10 Mbit/s 100 Mbit/s 1 Gbit/s
Target transmission distance [km]	Ethernet cable: 0.1 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	-
Maximum Tx optical power [dBm]	-
Minimum Tx optical power [dBm]	-
Minimum extinction ratio [dB]	-
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-
Overload power [dBm]	-
<b>NOTE</b> The supported rate depends on the interface. Surge protection specifications: ±1 kV in common mode	



## 10.10.2 SFP-1000BaseT (02313URG)

**Table 10-58** SFP-1000BaseT specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-1000BaseT
Part Number	02313URG
Model	SFP-1000BaseT
Form factor	SFP
Application standard	1000BASE-T
Connector type	RJ45
Optical fiber type	-
DDM options	Not supported
Transmission rate [bit/s]	10 Mbit/s 100 Mbit/s 1 Gbit/s
Target transmission distance [km]	Ethernet cable: 0.1 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	-
Maximum Tx optical power [dBm]	-
Minimum Tx optical power [dBm]	-
Minimum extinction ratio [dB]	-
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-
Overload power [dBm]	-
<b>NOTE</b> The supported rate depends on the interface. Surge protection specifications: ±1 kV in common mode	

### 10.10.3 SFP-GE-TV

**Table 10-59** SFP-GE-TV specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-TV
Part Number	02314BDD
Model	SFP-GE-TV
Form factor	SFP
Application standard	1000BASE-T
Connector type	RJ45
Optical fiber type	-
DDM options	Not supported
Transmission rate [bit/s]	10 Mbit/s 100 Mbit/s 1 Gbit/s
Target transmission distance [km]	Ethernet cable: 0.1 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	-
Maximum Tx optical power [dBm]	-
Minimum Tx optical power [dBm]	-
Minimum extinction ratio [dB]	-
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-
Overload power [dBm]	-
<b>NOTE</b> The supported rate depends on the interface. Surge protection specifications: ±1 kV in common mode	

 **NOTE**

This module can only be used on a switch running V200R022C00 or a later version.

## 10.11 SFP Stack Optical Modules

### 10.11.1 SFP-6GE-LR

**Table 10-60** SFP-6GE-LR specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-6GE-LR
Part Number	02310SRD
Model	SFP-6GE-LR
Form factor	SFP+
Application standard	6GBASE-LR (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	6 Gbit/s
Target transmission distance [km]	Single-mode fiber: 2 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.4 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-13.8 dBm
Overload power [dBm]	0.5 dBm

## 10.12 2.5GE eSFP Optical Modules

## 10.12.1 SFP-2.5G-FR

**Table 10-61** SFP-2.5G-FR specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-2.5G-FR
Part Number	02314LBD
Model	SFP-2.5G-FR
Form factor	eSFP
Application standard	1000BASE-LX/2.5G_FR
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 75°C (32°F to 167°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s 2.5 Gbit/s
Target transmission distance [km]	Single-mode fiber: - 2.5GE: 2 km - GE: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	-3 dBm
Minimum Tx optical power [dBm]	-9 dBm
Minimum extinction ratio [dB]	2.5GE: 6.0 GE: 8.0
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-18 dBm
Overload power [dBm]	-3 dBm

 **NOTE**

This module can only be used on a switch running V200R023C00 or a later version.

## 10.12.2 SFP-2.5G-SR-I

**Table 10-62** SFP-2.5G-SR-I specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-2.5G-SR-I
Part Number	02314LBB
Model	SFP-2.5G-SR-I
Form factor	eSFP
Application standard	2.5G_SR
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40.00°F to +185.00°F)
DDM options	Supported
Transmission rate [bit/s]	2.5 Gbit/s
Target transmission distance [km]	Multimode fiber (OM1): 0.032 km Multimode fiber (OM2): 0.12 km Multimode fiber (OM3): 0.3 km Multimode fiber (OM4): 0.3 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	-1 dBm
Minimum Tx optical power [dBm]	-9 dBm
Minimum extinction ratio [dB]	3 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-17 dBm
Overload power [dBm]	-1 dBm

 **NOTE**

This module can only be used on a switch running V200R023C00 or a later version.

## 10.13 10GE SFP+ Optical Modules

## 10.13.1 OMXD30000 (02318169)

**Table 10-63** OMXD30000 specifications

Item	Value
<b>Basic Information</b>	
Module name	OMXD30000
Part Number	02318169
Model	OMXD30000
Form factor	SFP+
Application standard	10GBASE-SR
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Multimode fiber (with modal bandwidth of 160 MHz*km and diameter of 62.5 μm): 0.026 km Multimode fiber (OM1): 0.033 km Multimode fiber (with modal bandwidth of 400 MHz*km and diameter of 50 μm): 0.066 km Multimode fiber (OM2): 0.082 km Multimode fiber (OM3): 0.3 km Multimode fiber (OM4): 0.4 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	-1.0 dBm
Minimum Tx optical power [dBm]	-7.3 dBm
Minimum extinction ratio [dB]	3.0 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-11.1 dBm
Overload power [dBm]	-1.0 dBm

## 10.13.2 OSX010000 (02318170)

**Table 10-64** OSX010000 specifications

Item	Value
<b>Basic Information</b>	
Module name	OSX010000
Part Number	02318170
Model	OSX010000
Form factor	SFP+
Application standard	10GBASE-LR
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-12.6 dBm
Overload power [dBm]	0.5 dBm

## 10.13.3 OSX040N01 (02310CNF)

**Table 10-65** OSX040N01 specifications

Item	Value
<b>Basic Information</b>	
Module name	OSX040N01

Item	Value
Part Number	02310CNF
Model	OSX040N01
Form factor	SFP+
Application standard	10GBASE-ER
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1550 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	-4.7 dBm
Minimum extinction ratio [dB]	3.0 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-14.1 dBm
Overload power [dBm]	-1.0 dBm

## 10.13.4 OSXD22N00

**Table 10-66** OSXD22N00 specifications

Item	Value
<b>Basic Information</b>	
Module name	OSXD22N00
Part Number	02310CRM
Model	OSXD22N00
Form factor	SFP+
Application standard	10GBASE-LRM
Connector type	LC



Item	Value
Optical fiber type	MMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Multimode fiber (with modal bandwidth of 400 MHz*km and diameter of 50 μm): 0.1 km Multimode fiber (with modal bandwidth of 500 MHz*km and diameter of 62.5 μm): 0.22 km Multimode fiber (OM1, OM2, OM3): 0.22 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-6.5 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-6.5 dBm
Overload power [dBm]	1.5 dBm

## 10.13.5 SFP-10G-ER-1310

**Table 10-67** SFP-10G-ER-1310 specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-ER-1310
Part Number	02311RLX
Model	SFP-10G-ER-1310
Form factor	SFP+
Application standard	Non-standard and compatible with the 10Gbase-ER
Connector type	LC

Item	Value
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	-2.0 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-20 dBm
Overload power [dBm]	-7.0 dBm
<b>NOTE</b> If an SFP-10G-ER-1310 optical module is connected to a 10GBase-ER optical module (1550 nm, 10GE, 40 km), the maximum transmission distance is only 20 km due to different specifications such as the wavelength and receiver sensitivity.	

 **NOTE**

This module can only be used on a switch running V200R010C00 or a later version.

## 10.13.6 SFP-10G-ER-C

**Table 10-68** SFP-10G-ER-C specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-ER-C
Part Number	02312UUH
Model	SFP-10G-ER-C
Form factor	SFP+
Application standard	10GBASE-ER
Connector type	LC

Item	Value
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1550 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	-4.7 dBm
Minimum extinction ratio [dB]	3.0 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-14.1 dBm
Overload power [dBm]	-1.0 dBm

### 10.13.7 SFP-10G-ER-SM1270-BIDI

**Table 10-69** SFP-10G-ER-SM1270-BIDI specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-ER-SM1270-BIDI
Part Number	02311BJC
Model	SFP-10G-ER-SM1270-BIDI
Form factor	SFP+
Application standard	10GBASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km

Item	Value
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1330 nm (RX) 1270 nm (TX)
Maximum Tx optical power [dBm]	5 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-18 dBm
Overload power [dBm]	-9 dBm
<b>NOTE</b> Supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-10G-ER-SM1270-BIDI must be used with SFP-10G-ER-SM1330-BIDI.	

 **NOTE**

This module can only be used on a switch running V200R009C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

## 10.13.8 SFP-10G-ER-SM1330-BIDI

**Table 10-70** SFP-10G-ER-SM1330-BIDI specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-ER-SM1330-BIDI
Part Number	02311BJB
Model	SFP-10G-ER-SM1330-BIDI
Form factor	SFP+
Application standard	10GBASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s

Item	Value
Target transmission distance [km]	Single-mode fiber: 40 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1270 nm (RX) 1330 nm (TX)
Maximum Tx optical power [dBm]	5 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-18 dBm
Overload power [dBm]	-9 dBm
<b>NOTE</b> Supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-10G-ER-SM1330-BIDI must be used with SFP-10G-ER-SM1270-BIDI.	

 **NOTE**

This module can only be used on a switch running V200R009C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

### 10.13.9 SFP-10G-LR-C (02312UUG)

**Table 10-71** SFP-10G-LR-C specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-LR-C
Part Number	02312UUG
Model	SFP-10G-LR-C
Form factor	SFP+
Application standard	10GBASE-LR
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported

Item	Value
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-12.6 dBm
Overload power [dBm]	0.5 dBm

## 10.13.10 SFP-10G-SR-C

Table 10-72 SFP-10G-SR-C specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-SR-C
Part Number	02312UUE
Model	SFP-10G-SR-C
Form factor	SFP+
Application standard	10GBASE-SR
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s

Item	Value
Target transmission distance [km]	Multimode fiber (with modal bandwidth of 160 MHz*km and diameter of 62.5 μm): 0.026 km Multimode fiber (OM1): 0.033 km Multimode fiber (with modal bandwidth of 400 MHz*km and diameter of 50 μm): 0.066 km Multimode fiber (OM2): 0.082 km Multimode fiber (OM3): 0.3 km Multimode fiber (OM4): 0.4 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	-1.0 dBm
Minimum Tx optical power [dBm]	-7.3 dBm
Minimum extinction ratio [dB]	3.0 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-11.1 dBm
Overload power [dBm]	-1.0 dBm

### 10.13.11 SFP-10G-USR (02310MNW)

**Table 10-73** SFP-10G-USR specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-USR
Part Number	02310MNW
Model	SFP-10G-USR
Form factor	SFP+
Application standard	10GBASE-USR (non-standard)
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported

Item	Value
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): 0.1 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	-1.0 dBm
Minimum Tx optical power [dBm]	-7.3 dBm
Minimum extinction ratio [dB]	3.0 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-10.7 dBm
Overload power [dBm]	0.5 dBm

## 10.13.12 SFP-10G-ZR

**Table 10-74** SFP-10G-ZR specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-ZR
Part Number	02310SNN
Model	SFP-10G-ZR
Form factor	SFP+
Application standard	10GBASE-ZR
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 80 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1550 nm
Maximum Tx optical power [dBm]	4.0 dBm



Item	Value
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-24.0 dBm
Overload power [dBm]	-7.0 dBm

### 10.13.13 OMXD30000 (02313URC)

Table 10-75 OMXD30000 specifications

Item	Value
<b>Basic Information</b>	
Module name	OMXD30000
Part Number	02313URC
Model	OMXD30000
Form factor	SFP+
Application standard	10GBASE-SR
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Multimode fiber (with modal bandwidth of 160 MHz*km and diameter of 62.5 μm): 0.026 km Multimode fiber (OM1): 0.033 km Multimode fiber (with modal bandwidth of 400 MHz*km and diameter of 50 μm): 0.066 km Multimode fiber (OM2): 0.082 km Multimode fiber (OM3): 0.3 km Multimode fiber (OM4): 0.4 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm

Item	Value
Maximum Tx optical power [dBm]	-1.0 dBm
Minimum Tx optical power [dBm]	-7.3 dBm
Minimum extinction ratio [dB]	3.0 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-11.1 dBm
Overload power [dBm]	-1.0 dBm

### 10.13.14 OSX010000 (02313URK)

Table 10-76 OSX010000 specifications

Item	Value
<b>Basic Information</b>	
Module name	OSX010000
Part Number	02313URK
Model	OSX010000
Form factor	SFP+
Application standard	10GBASE-LR
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-12.6 dBm

Item	Value
Overload power [dBm]	0.5 dBm

## 10.13.15 SFP-10G-USR (02313URN)

Table 10-77 SFP-10G-USR specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-USR
Part Number	02313URN
Model	SFP-10G-USR
Form factor	SFP+
Application standard	10GBASE-USR (non-standard)
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): 0.1 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	-1.0 dBm
Minimum Tx optical power [dBm]	-7.3 dBm
Minimum extinction ratio [dB]	3.0 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-10.7 dBm
Overload power [dBm]	0.5 dBm

## 10.13.16 SFP+10GE-LH10-SM1310

**Table 10-78** SFP+10GE-LH10-SM1310 specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP+10GE-LH10-SM1310
Part Number	02311MUU
Model	SFP+10GE-LH10-SM1310
Form factor	SFP+
Application standard	10GBASE-LR
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm

## 10.13.17 SFP-10G-BXD1

**Table 10-79** SFP-10G-BXD1 specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-BXD1

Item	Value
Part Number	02310QDT
Model	SFP-10G-BXD1
Form factor	SFP+
Application standard	10GBASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1270 nm (RX) 1330 nm (TX)
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm
<b>NOTE</b> Supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-10G-BXD1 must be used with SFP-10G-BXU1.	

## 10.13.18 SFP-10G-BXU1

**Table 10-80** SFP-10G-BXU1 specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-BXU1
Part Number	02310QBJ

Item	Value
Model	SFP-10G-BXU1
Form factor	SFP+
Application standard	10GBASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1330 nm (RX) 1270 nm (TX)
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm
<b>NOTE</b> Supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-10G-BXU1 must be used with SFP-10G-BXD1.	

## 10.13.19 SFP-10G-SR

Table 10-81 SFP-10G-SR specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-SR
Part Number	02311SKW
Model	SFP-10G-SR

Item	Value
Form factor	SFP+
Application standard	10GBASE-SR
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0°C to 85°C (32°F to 185°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): 0.3 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	-1.0 dBm
Minimum Tx optical power [dBm]	-7.3 dBm
Minimum extinction ratio [dB]	3.0 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-11.1 dBm
Overload power [dBm]	-1.0 dBm

## 10.13.20 SFP-10G-iLR

**Table 10-82** SFP-10G-iLR specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-iLR
Part Number	02311BJJ
Model	SFP-10G-iLR
Form factor	SFP+
Application standard	10GBASE-iLR (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)

Item	Value
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode optical fiber: 1.4 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm

 **NOTE**

This module can only be used on a switch running V200R008C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

## 10.13.21 SFP-10G-iLR-C

**Table 10-83** SFP-10G-iLR-C specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-iLR-C
Part Number	02312UUF
Model	SFP-10G-iLR-C
Form factor	SFP+
Application standard	10GBASE-iLR (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s



Item	Value
Target transmission distance [km]	Single-mode optical fiber: 1.4 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm

 NOTE

This module can only be used on a switch running V200R008C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

## 10.13.22 SFP-10G-LR-I (02313ABG)

Table 10-84 SFP-10G-LR-I specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-LR-I
Part Number	02313ABG
Model	SFP-10G-LR-I
Form factor	SFP+
Application standard	10GBASE-LR
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	

Item	Value
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm

### 10.13.23 OSX040N01 (02314KKG)

**Table 10-85** OSX040N01 specifications

Item	Value
<b>Basic Information</b>	
Module name	OSX040N01
Part Number	02314KKG
Model	OSX040N01
Form factor	SFP+
Application standard	10GBASE-ER
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1550 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	-4.7 dBm
Minimum extinction ratio [dB]	3.0 dB
<b>Receiver Optical Characteristics</b>	

Item	Value
Rx sensitivity [dBm]	-14.1 dBm
Overload power [dBm]	-1.0 dBm

## 10.13.24 SFP-10G-LR-C (02314KKE)

**Table 10-86** SFP-10G-LR-C specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-LR-C
Part Number	02314KKE
Model	SFP-10G-LR-C
Form factor	SFP+
Application standard	10GBASE-LR
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-12.6 dBm
Overload power [dBm]	0.5 dBm

## 10.13.25 SFP-10G-LR-I (02314LBW)

**Table 10-87** SFP-10G-LR-I specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-LR-I
Part Number	02314LBW
Model	SFP-10G-LR-I
Form factor	SFP+
Application standard	10GBASE-LR
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm

## 10.14 10GE-CWDM SFP+ Optical Modules

## 10.14.1 SFP-10G-ZCW1471

**Table 10-88** SFP-10G-ZCW1471 specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-ZCW1471
Part Number	02310SSG
Model	SFP-10G-ZCW1471
Form factor	SFP+
Application standard	10G-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 70 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1471 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.2 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-23.0 dBm
Overload power [dBm]	-7.0 dBm

## 10.14.2 SFP-10G-ZCW1491

**Table 10-89** SFP-10G-ZCW1491 specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-ZCW1491

Item	Value
Part Number	02310SSF
Model	SFP-10G-ZCW1491
Form factor	SFP+
Application standard	10G-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 70 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1491 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.2 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-23.0 dBm
Overload power [dBm]	-7.0 dBm

### 10.14.3 SFP-10G-ZCW1511

**Table 10-90** SFP-10G-ZCW1511 specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-ZCW1511
Part Number	02310SSE
Model	SFP-10G-ZCW1511
Form factor	SFP+
Application standard	10G-CWDM
Connector type	LC

Item	Value
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 70 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1511 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.2 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-23.0 dBm
Overload power [dBm]	-7.0 dBm

## 10.14.4 SFP-10G-ZCW1531

**Table 10-91** SFP-10G-ZCW1531 specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-ZCW1531
Part Number	02310SSD
Model	SFP-10G-ZCW1531
Form factor	SFP+
Application standard	10G-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 70 km

Item	Value
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1531 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.2 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-23.0 dBm
Overload power [dBm]	-7.0 dBm

## 10.14.5 SFP-10G-ZCW1551

**Table 10-92** SFP-10G-ZCW1551 specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-ZCW1551
Part Number	02310SSC
Model	SFP-10G-ZCW1551
Form factor	SFP+
Application standard	10G-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 70 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1551 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.2 dB



Item	Value
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-23.0 dBm
Overload power [dBm]	-7.0 dBm

## 10.14.6 SFP-10G-ZCW1571

**Table 10-93** SFP-10G-ZCW1571 specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-ZCW1571
Part Number	02310SSB
Model	SFP-10G-ZCW1571
Form factor	SFP+
Application standard	10G-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 70 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1571 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.2 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-23.0 dBm
Overload power [dBm]	-7.0 dBm

## 10.14.7 SFP-10G-ZCW1591

**Table 10-94** SFP-10G-ZCW1591 specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-ZCW1591
Part Number	02310SSA
Model	SFP-10G-ZCW1591
Form factor	SFP+
Application standard	10G-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 70 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1591 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.2 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-23.0 dBm
Overload power [dBm]	-7.0 dBm

## 10.14.8 SFP-10G-ZCW1611

**Table 10-95** SFP-10G-ZCW1611 specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-ZCW1611

Item	Value
Part Number	02310SRY
Model	SFP-10G-ZCW1611
Form factor	SFP+
Application standard	10G-CWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 70 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1611 nm
Maximum Tx optical power [dBm]	4.0 dBm
Minimum Tx optical power [dBm]	0 dBm
Minimum extinction ratio [dB]	8.2 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-23.0 dBm
Overload power [dBm]	-7.0 dBm

## 10.15 10GE-DWDM SFP+ Optical Modules

### 10.15.1 SFP-10G-ZDWT

**Table 10-96** SFP-10G-ZDWT specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-ZDWT
Part Number	02310YUT
Model	SFP-10G-ZDWT
Form factor	SFP+

Item	Value
Application standard	10GBASE-DWDM
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 60 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1529.16 nm - 1560.61 nm
Maximum Tx optical power [dBm]	3 dBm
Minimum Tx optical power [dBm]	-1 dBm
Minimum extinction ratio [dB]	8.2 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-24 dBm
Overload power [dBm]	-1 dBm
<b>NOTE</b> The startup of the optical module takes a long time. Therefore, when the optical module is just installed into a switch port, the switch may incorrectly report an alarm indicating that the transmit optical power is low.	

 **NOTE**

This module can only be used on a switch running V200R009C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

## 10.16 25GE SFP28 Optical Modules

### 10.16.1 SFP-25G-LR

**Table 10-97** SFP-25G-LR specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-25G-LR

Item	Value
Part Number	02312LSE
Model	SFP-25G-LR
Form factor	SFP28
Application standard	25GBASE-LR
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	25 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	2 dBm
Minimum Tx optical power [dBm]	-7 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-11.3 dBm
Overload power [dBm]	2 dBm

## 10.16.2 SFP-25G-SR

**Table 10-98** SFP-25G-SR specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-25G-SR
Part Number	02311KNR
Model	SFP-25G-SR
Form factor	SFP28
Application standard	25GBASE-SR
Connector type	LC

Item	Value
Optical fiber type	MMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	25 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): - Disables the RS-FEC function: 0.03 km - Enables the RS-FEC function: 0.07 km Multimode fiber (OM4): - Disables the RS-FEC function: 0.04 km - Enables the RS-FEC function: 0.1 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	2.4 dBm
Minimum Tx optical power [dBm]	-8.4 dBm
Minimum extinction ratio [dB]	2 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-10.3 dBm
Overload power [dBm]	2.4 dBm

### 10.16.3 SFP-25G-ESR

**Table 10-99** SFP-25G-ESR specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-25G-ESR
Part Number	02313JFQ
Model	SFP-25G-ESR
Form factor	SFP28
Application standard	25GBASE-ESR (non-standard)
Connector type	LC

Item	Value
Optical fiber type	MMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	10/25 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): 0.2 km Multimode fiber (OM4): 0.3 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	2.4 dBm
Minimum Tx optical power [dBm]	-4.4 dBm
Minimum extinction ratio [dB]	3 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-10.3 dBm
Overload power [dBm]	2.4 dBm
<p><b>NOTE</b></p> <p>When the optical module is used on a 25GE port, you can set the speed to 10 Gbit/s using a command.</p> <p>When the optical module works at 25 Gbit/s, the maximum transmission distance of the optical module depends on the quality of optical fibers.</p>	

 **NOTE**

This module can only be used on a switch running V200R020C10 or a later version.

## 10.16.4 SFP-25G-LR-BXU1-I

**Table 10-100** SFP-25G-LR-BXU1-I specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-25G-LR-BXU1-I
Part Number	02314LBS
Model	SFP-25G-LR-BXU1-I
Form factor	SFP28
Application standard	25GBASE-LR BiDi

Item	Value
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	25 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1270 nm (TX) 1330 nm (RX)
Maximum Tx optical power [dBm]	2 dBm
Minimum Tx optical power [dBm]	-4 dBm
Minimum extinction ratio [dB]	3 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-12 dBm
Overload power [dBm]	2 dBm

 **NOTE**

This module can only be used on a switch running V200R023C00 or a later version.

## 10.16.5 SFP-25G-LR-BXD1-I

**Table 10-101** SFP-25G-LR-BXD1-I specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-25G-LR-BXD1-I
Part Number	02314LBU
Model	SFP-25G-LR-BXD1-I
Form factor	SFP28
Application standard	25GBASE-LR BiDi
Connector type	LC
Optical fiber type	SMF



Item	Value
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	25 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1330 nm (TX) 1270 nm (RX)
Maximum Tx optical power [dBm]	2 dBm
Minimum Tx optical power [dBm]	-4 dBm
Minimum extinction ratio [dB]	3 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-12 dBm
Overload power [dBm]	2 dBm

 **NOTE**

This module can only be used on a switch running V200R023C00 or a later version.

## 10.16.6 SFP-25G-eLR-BXD1-I

**Table 10-102** SFP-25G-eLR-BXD1-I specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-25G-eLR-BXD1-I
Part Number	02314LCK
Model	SFP-25G-eLR-BXD1-I
Form factor	SFP28
Application standard	25GBASE-LR BiDi 20 km (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)

Item	Value
DDM options	Supported
Transmission rate [bit/s]	25 Gbit/s
Target transmission distance [km]	Single-mode fiber: 20 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1330 nm (TX) 1270 nm (RX)
Maximum Tx optical power [dBm]	3 dBm
Minimum Tx optical power [dBm]	-3 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-14 dBm
Overload power [dBm]	3 dBm

 **NOTE**

This module can only be used on a switch running V200R023C00 or a later version.

## 10.16.7 SFP-25G-eLR-BXU1-I

**Table 10-103** SFP-25G-eLR-BXU1-I specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-25G-eLR-BXU1-I
Part Number	02314LCJ
Model	SFP-25G-eLR-BXU1-I
Form factor	SFP28
Application standard	25GBASE-LR BiDi 20 km (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported

Item	Value
Transmission rate [bit/s]	25 Gbit/s
Target transmission distance [km]	Single-mode fiber: 20 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1270 nm (TX) 1330 nm (RX)
Maximum Tx optical power [dBm]	3 dBm
Minimum Tx optical power [dBm]	-3 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-14 dBm
Overload power [dBm]	3 dBm

 NOTE

This module can only be used on a switch running V200R023C00 or a later version.

## 10.17 40GE QSFP+ Optical Modules

### 10.17.1 QSFP-40G-ER4

**Table 10-104** QSFP-40G-ER4 specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-40G-ER4
Part Number	02311BKT
Model	QSFP-40G-ER4
Form factor	QSFP+
Application standard	40GBASE-ER4
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)

Item	Value
DDM options	Supported
Transmission rate [bit/s]	40 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1271 nm,1291 nm,1311 nm,1331 nm
Maximum Tx optical power [dBm]	4.5 dBm
Minimum Tx optical power [dBm]	-2.7 dBm
Minimum extinction ratio [dB]	5.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-19.5 dBm
Overload power [dBm]	-4.5 dBm

 **NOTE**

This module can only be used on a switch running V200R008C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

## 10.17.2 QSFP-40G-LR4 (02310MHS)

**Table 10-105** QSFP-40G-LR4 specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-40G-LR4
Part Number	02310MHS
Model	QSFP-40G-LR4
Form factor	QSFP+
Application standard	40GBASE-LR4
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	40 Gbit/s

Item	Value
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1271 nm,1291 nm,1311 nm,1331 nm
Maximum Tx optical power [dBm]	2.3 dBm
Minimum Tx optical power [dBm]	-7.0 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-11.5 dBm
Overload power [dBm]	3.3 dBm

### 10.17.3 QSFP-40G-LX4

Table 10-106 QSFP-40G-LX4 specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-40G-LX4
Part Number	02311HNP
Model	QSFP-40G-LX4
Form factor	QSFP+
Application standard	40GBASE-LX4
Connector type	LC
Optical fiber type	<ul style="list-style-type: none"> <li>• SMF</li> <li>• MMF</li> </ul>
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	40 Gbit/s
Target transmission distance [km]	Single-mode fiber: 2 km Multimode fiber (OM3): 0.15 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1271 nm,1291 nm,1311 nm,1331 nm

Item	Value
Maximum Tx optical power [dBm]	2.3 dBm
Minimum Tx optical power [dBm]	-7.0 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-11.5 dBm
Overload power [dBm]	2.3 dBm
<b>NOTE</b> When QSFP-40G-LX4 optical modules use multimode optical fibers, the fibers cannot be connected through multiple optical distribution frames (ODFs).	

 **NOTE**

This module can only be used on a switch running V200R009C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

## 10.17.4 QSFP-40G-SDLC-PAM

**Table 10-107** QSFP-40G-SDLC-PAM specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-40G-SDLC-PAM
Part Number	02311PUU
Model	QSFP-40G-SDLC-PAM
Form factor	QSFP+
Application standard	40GBASE-PAM4 (non-standard)
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	40 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): 100 m Multimode fiber (OM4): 150 m
<b>Transmitter Optical Characteristics</b>	

Item	Value
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	2.4 dBm
Minimum Tx optical power [dBm]	-2.5 dBm
Minimum extinction ratio [dB]	3 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-8.0 dBm
Overload power [dBm]	2.4 dBm
<b>NOTE</b> Unidirectional single-fiber communication is not supported.	

 **NOTE**

This module can only be used on a switch running V200R011C10 or a later version.

## 10.17.5 QSFP-40G-SR-BD

**Table 10-108** QSFP-40G-SR-BD specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-40G-SR-BD
Part Number	02311FPA
Model	QSFP-40G-SR-BD
Form factor	QSFP+
Application standard	40GBASE-BIDI (non-standard)
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	10°C to 70°C (50°F to 158°F) Note: When the operating temperature is lower than 10°C (50°F), intermittent disconnection or packet loss may occur on ports.
DDM options	Not supported
Transmission rate [bit/s]	40 Gbit/s

Item	Value
Target transmission distance [km]	Multimode fiber (OM3): 0.1 km Multimode fiber (OM4): 0.15 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm,900 nm
Maximum Tx optical power [dBm]	5 dBm
Minimum Tx optical power [dBm]	-4 dBm
Minimum extinction ratio [dB]	4.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-4.5 dBm
Overload power [dBm]	5 dBm
<p><b>NOTE</b></p> <p>The QSFP-40G-SR-BD optical module does not support some digital diagnostic monitoring (DDM) functions.</p> <p>The QSFP-40G-SR-BD optical module does not support unidirectional single-fiber communication.</p>	

 **NOTE**

This module cannot be used for CSS or stack connection before the V200R019C10SPC500 version.

This module can only be used on a switch running V200R009C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

## 10.17.6 QSFP-40G-SR4

**Table 10-109** QSFP-40G-SR4 specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-40G-SR4
Part Number	02310MHQ
Model	QSFP-40G-SR4
Form factor	QSFP+
Application standard	40GBASE-SR4
Connector type	MPO/PC (8-strand or 12-strand, type B, female connector)



Item	Value
Optical fiber type	MMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	40 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): 0.1 km Multimode fiber (OM4): 0.15 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	2.4 dBm
Minimum Tx optical power [dBm]	-7.6 dBm
Minimum extinction ratio [dB]	3.0 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-5.4 dBm
Overload power [dBm]	2.4 dBm

### 10.17.7 QSFP-40G-eSDLC-PAM

Table 10-110 QSFP-40G-eSDLC-PAM specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-40G-eSDLC-PAM
Part Number	02311QTR
Model	QSFP-40G-eSDLC-PAM
Form factor	QSFP+
Application standard	40GBASE-ePAM4 (non-standard)
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	40 Gbit/s

Item	Value
Target transmission distance [km]	Multimode fiber (OM3): 100 m Multimode fiber (OM4): 300 m
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	2.4 dBm
Minimum Tx optical power [dBm]	-2 dBm
Minimum extinction ratio [dB]	3 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-8.0 dBm
Overload power [dBm]	2.4 dBm
<b>NOTE</b> Unidirectional single-fiber communication is not supported.	

 **NOTE**

This module can only be used on a switch running V200R011C10 or a later version.

## 10.17.8 QSFP-40G-eSM4

**Table 10-111** QSFP-40G-eSM4 specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-40G-eSM4
Part Number	02311DTR
Model	QSFP-40G-eSM4
Form factor	QSFP+
Application standard	40GBASE-eSM4 (non-standard)
Connector type	MPO/APC (8-strand or 12-strand, type B, female connector)
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	40 Gbit/s

Item	Value
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-12.6 dBm
Overload power [dBm]	0.5 dBm

 **NOTE**

This module can connect a 40GE port to four 10GE ports using a 1-to-4 cable.  
This module can only be used on a switch running V200R010C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

## 10.17.9 QSFP-40G-eSR4 (02310RMB)

**Table 10-112** QSFP-40G-eSR4 specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-40G-eSR4
Part Number	02310RMB
Model	QSFP-40G-eSR4
Form factor	QSFP+
Application standard	40GBASE-eSR4 (non-standard)
Connector type	MPO/PC (8-strand or 12-strand, type B, female connector)
Optical fiber type	MMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	40 Gbit/s

Item	Value
Target transmission distance [km]	Multimode fiber (with modal bandwidth of 160 MHz*km and diameter of 62.5 μm): 0.026 km Multimode fiber (OM1): 0.033 km Multimode fiber (with modal bandwidth of 400 MHz*km and diameter of 50 μm): 0.066 km Multimode fiber (OM2): 0.082 km Multimode fiber (OM3): 0.3 km Multimode fiber (OM4): 0.4 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-7.6 dBm
Minimum extinction ratio [dB]	3.0 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-11.1 dBm
Overload power [dBm]	2.4 dBm

 NOTE

This module can connect a 40GE port to four 10GE ports using a 1-to-4 cable.

## 10.17.10 QSFP-40G-iSM4

Table 10-113 QSFP-40G-iSM4 specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-40G-iSM4
Part Number	02311DRW
Model	QSFP-40G-iSM4
Form factor	QSFP+
Application standard	40GBASE-iSM4 (non-standard)
Connector type	MPO/APC (8-strand or 12-strand, type B, female connector)

Item	Value
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	40 Gbit/s
Target transmission distance [km]	Single-mode fiber: 1.4 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-11.5 dBm
Overload power [dBm]	0.5 dBm

 **NOTE**

This module can connect a 40GE port to four 10GE ports using a 1-to-4 cable.

This module can only be used on a switch running V200R009C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

## 10.17.11 QSFP-40G-iSR4 (02310MHR)

**Table 10-114** QSFP-40G-iSR4 specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-40G-iSR4
Part Number	02310MHR
Model	QSFP-40G-iSR4
Form factor	QSFP+
Application standard	40GBASE-SR4 40GBASE-iSR4 (non-standard)
Connector type	MPO/PC (8-strand or 12-strand, type B, female connector)

Item	Value
Optical fiber type	MMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	40 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): 0.1 km Multimode fiber (OM4): 0.15 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-7.6 dBm
Minimum extinction ratio [dB]	3.0 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-9.5 dBm
Overload power [dBm]	2.4 dBm

 **NOTE**

This module can connect a 40GE port to four 10GE ports using a 1-to-4 cable.

## 10.17.12 QSFP-40G-LR4-Lite (02311YVB)

**Table 10-115** QSFP-40G-LR4-Lite specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-40G-LR4-Lite
Part Number	02311YVB
Model	QSFP-40G-LR4-Lite
Form factor	QSFP+
Application standard	40GBASE-LR4 Lite
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)

Item	Value
DDM options	Supported
Transmission rate [bit/s]	40 Gbit/s
Target transmission distance [km]	Single-mode fiber (G.652, diameter: 9 μm): 2 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1271 nm,1291 nm,1311 nm,1331 nm
Maximum Tx optical power [dBm]	2.3 dBm
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-10.5 dBm
Overload power [dBm]	2.3 dBm

 **NOTE**

This module can only be used on a switch running V200R022C10 or a later version.

### 10.17.13 QSFP-40G-LX4-MM

**Table 10-116** QSFP-40G-LX4-MM specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-40G-LX4-MM
Part Number	02313NUG
Model	QSFP-40G-LX4-MM
Form factor	QSFP+
Application standard	40GBASE-LX4
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	40 Gbit/s

Item	Value
Target transmission distance [km]	Multimode fiber (OM3, diameter: 50 μm): 150 m Multimode fiber (OM4, diameter: 50 μm): 150 m
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1271 nm,1291 nm,1311 nm,1331 nm
Maximum Tx optical power [dBm]	2.3 dBm
Minimum Tx optical power [dBm]	-7.0 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-10.5 dBm
Overload power [dBm]	3.5 dBm
<b>NOTE</b> Limitations: - In actual applications, the number of connectors in an optical fiber link cannot exceed 4. - This module is sensitive to fiber link contamination. During deployment, ensure that the fiber end face meets the fiber application standard. For details, refer to the requirements for single-mode connectors in the end face requirements for fiber ceramic ferrules under "Cables" > "Fiber Jumpers."	

 **NOTE**

This module can only be used on a switch running V200R022C10 or a later version.

## 10.18 Industrial Optical Modules

### 10.18.1 OGSC10DD0

**Table 10-117** OGSC10DD0 specifications

Item	Value
<b>Basic Information</b>	
Module name	OGSC10DD0
Part Number	02310LJH
Model	OGSC10DD0
Form factor	eSFP



Item	Value
Application standard	1000BASE-LX10/LH
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	-3.0 dBm
Minimum Tx optical power [dBm]	-9.0 dBm
Minimum extinction ratio [dB]	9.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-19 dBm
Overload power [dBm]	-3.0 dBm

## 10.18.2 OGSC40DD0

Table 10-118 OGSC40DD0 specifications

Item	Value
<b>Basic Information</b>	
Module name	OGSC40DD0
Part Number	02310LJJ
Model	OGSC40DD0
Form factor	eSFP
Application standard	Non-standard
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported

Item	Value
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0 dBm
Minimum Tx optical power [dBm]	-5.0 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-22.5 dBm
Overload power [dBm]	-3.0 dBm

### 10.18.3 OGSM01880

Table 10-119 OGSM01880 specifications

Item	Value
<b>Basic Information</b>	
Module name	OGSM01880
Part Number	02310LJG
Model	OGSM01880
Form factor	eSFP
Application standard	1000BASE-SX
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s

Item	Value
Target transmission distance [km]	Multimode fiber (with modal bandwidth of 160 MHz*km and diameter of 62.5 μm): 0.22 km Multimode fiber (OM1): 0.275 km Multimode fiber (with modal bandwidth of 400 MHz*km and diameter of 50 μm): 0.5 km Multimode fiber (OM2): 0.55 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	-2.5 dBm
Minimum Tx optical power [dBm]	-10 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-17.0 dBm
Overload power [dBm]	0 dBm

## 10.18.4 SFP-GE-BX-D1-I

Table 10-120 SFP-GE-BX-D1-I specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-BX-D1-I
Part Number	02311DMA
Model	SFP-GE-BX-D1-I
Form factor	SFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s

Item	Value
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm (RX) 1490 nm (TX)
Maximum Tx optical power [dBm]	-3 dBm
Minimum Tx optical power [dBm]	-9 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-19.5 dBm
Overload power [dBm]	-3 dBm
<b>NOTE</b> Supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-BX-D1-I must be used with SFP-GE-BX-U1-I.	

 **NOTE**

This module can only be used on a switch running V200R012C00 or a later version.

## 10.18.5 SFP-GE-BX-U1-I

**Table 10-121** SFP-GE-BX-U1-I specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-BX-U1-I
Part Number	02311DMF
Model	SFP-GE-BX-U1-I
Form factor	SFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported

Item	Value
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1490 nm (RX) 1310 nm (TX)
Maximum Tx optical power [dBm]	-3 dBm
Minimum Tx optical power [dBm]	-9 dBm
Minimum extinction ratio [dB]	9 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-19.5 dBm
Overload power [dBm]	-3 dBm
<b>NOTE</b> Supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-BX-D1-I must be used with SFP-GE-BX-U1-I.	

 **NOTE**

This module can only be used on a switch running V200R012C00 or a later version.

## 10.18.6 SFP-GE-BX40-D-I

**Table 10-122** SFP-GE-BX40-D-I specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-BX40-D-I
Part Number	02312TMC
Model	SFP-GE-BX40-D-I
Form factor	SFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)

Item	Value
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm (RX) 1490 nm (TX)
Maximum Tx optical power [dBm]	6.5 dBm
Minimum Tx optical power [dBm]	1.5 dBm
Minimum extinction ratio [dB]	8.2 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-26 dBm
Overload power [dBm]	-7 dBm
<b>NOTE</b> Supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-BX40-D-I must be used with SFP-GE-BX40-U-I.	

 **NOTE**

This module can only be used on a switch running V200R019C00 or a later version.

## 10.18.7 SFP-GE-BX40-U-I

**Table 10-123** SFP-GE-BX40-U-I specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-BX40-U-I
Part Number	02312TMB
Model	SFP-GE-BX40-U-I
Form factor	SFP
Application standard	1000BASE-BX
Connector type	LC
Optical fiber type	SMF

Item	Value
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 40 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1490 nm (RX) 1310 nm (TX)
Maximum Tx optical power [dBm]	6.5 dBm
Minimum Tx optical power [dBm]	1.5 dBm
Minimum extinction ratio [dB]	8.2 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-26 dBm
Overload power [dBm]	-7 dBm
<b>NOTE</b> Supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-BX40-U-I must be used with SFP-GE-BX40-D-I.	

 **NOTE**

This module can only be used on a switch running V200R019C00 or a later version.

## 10.18.8 SFP+10GE-LH10-SM1310

**Table 10-124** SFP+10GE-LH10-SM1310 specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP+10GE-LH10-SM1310
Part Number	02311MUU
Model	SFP+10GE-LH10-SM1310
Form factor	SFP+
Application standard	10GBASE-LR
Connector type	LC

Item	Value
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm

## 10.18.9 SFP-10G-BXD1

Table 10-125 SFP-10G-BXD1 specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-BXD1
Part Number	02310QDT
Model	SFP-10G-BXD1
Form factor	SFP+
Application standard	10GBASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km



Item	Value
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1270 nm (RX) 1330 nm (TX)
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm
<b>NOTE</b> Supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-10G-BXD1 must be used with SFP-10G-BXU1.	

## 10.18.10 SFP-10G-BXU1

Table 10-126 SFP-10G-BXU1 specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-BXU1
Part Number	02310QBJ
Model	SFP-10G-BXU1
Form factor	SFP+
Application standard	10GBASE-BX
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	

Item	Value
Center wavelength [nm]	1330 nm (RX) 1270 nm (TX)
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm
<b>NOTE</b> Supports the single-fiber bidirectional function. Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-10G-BXU1 must be used with SFP-10G-BXD1.	

## 10.18.11 SFP-10G-SR

Table 10-127 SFP-10G-SR specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-SR
Part Number	02311SKW
Model	SFP-10G-SR
Form factor	SFP+
Application standard	10GBASE-SR
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0°C to 85°C (32°F to 185°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): 0.3 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm

Item	Value
Maximum Tx optical power [dBm]	-1.0 dBm
Minimum Tx optical power [dBm]	-7.3 dBm
Minimum extinction ratio [dB]	3.0 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-11.1 dBm
Overload power [dBm]	-1.0 dBm

## 10.18.12 SFP-10G-iLR

**Table 10-128** SFP-10G-iLR specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-iLR
Part Number	02311BJJ
Model	SFP-10G-iLR
Form factor	SFP+
Application standard	10GBASE-iLR (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode optical fiber: 1.4 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-14.4 dBm

Item	Value
Overload power [dBm]	0.5 dBm

 **NOTE**

This module can only be used on a switch running V200R008C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

## 10.18.13 SFP-10G-iLR-C

**Table 10-129** SFP-10G-iLR-C specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-iLR-C
Part Number	02312UUF
Model	SFP-10G-iLR-C
Form factor	SFP+
Application standard	10GBASE-iLR (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode optical fiber: 1.4 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm

 NOTE

This module can only be used on a switch running V200R008C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

## 10.18.14 SFP-10G-LR-I (02313ABG)

**Table 10-130** SFP-10G-LR-I specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-LR-I
Part Number	02313ABG
Model	SFP-10G-LR-I
Form factor	SFP+
Application standard	10GBASE-LR
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm

## 10.18.15 SFP-10G-LR-I (02314LBW)

**Table 10-131** SFP-10G-LR-I specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-LR-I
Part Number	02314LBW
Model	SFP-10G-LR-I
Form factor	SFP+
Application standard	10GBASE-LR
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm

## 10.19 100GE QSFP28 Optical Modules

## 10.19.1 QSFP-100G-CLR4

**Table 10-132** QSFP-100G-CLR4 specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-100G-CLR4
Part Number	02311MNP
Model	QSFP-100G-CLR4
Form factor	QSFP28
Application standard	100GBASE-CLR4 (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Single-mode fiber (G.652): 2 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1271 nm,1291 nm,1311 nm,1331 nm
Maximum Tx optical power [dBm]	2.5 dBm
Minimum Tx optical power [dBm]	-6.5 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-10.7 dBm
Overload power [dBm]	2.5 dBm

## 10.19.2 QSFP-100G-CWDM4

**Table 10-133** QSFP-100G-CWDM4 specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-100G-CWDM4

Item	Value
Part Number	02311MNN
Model	QSFP-100G-CWDM4
Form factor	QSFP28
Application standard	100GBASE-CWDM4 (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Single-mode fiber (G.652): 2 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1271 nm,1291 nm,1311 nm,1331 nm
Maximum Tx optical power [dBm]	2.5 dBm
Minimum Tx optical power [dBm]	-6.5 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-9.8 dBm
Overload power [dBm]	2.5 dBm

### 10.19.3 QSFP-100G-ER4-Lite

Table 10-134 QSFP-100G-ER4-Lite specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-100G-ER4-Lite
Part Number	02311YXR
Model	QSFP-100G-ER4-Lite
Form factor	QSFP28
Application standard	Non-standard and compatible with the 100GBASE-ER4



Item	Value
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Single-mode fiber (G.652): Disables the RS-FEC function: 30 km Enables the RS-FEC function: 40 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1295 nm,1300 nm,1304 nm,1309 nm
Maximum Tx optical power [dBm]	2.9 dBm
Minimum Tx optical power [dBm]	-2.5 dBm
Minimum extinction ratio [dB]	8 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-18.4 dBm
Overload power [dBm]	-3.5 dBm

 **NOTE**

This module can only be used on a switch running V200R012C00 or a later version.  
The RS-FEC function can be enabled on this module in V200R019C00 or a later version.

## 10.19.4 QSFP-100G-eSR4

**Table 10-135** QSFP-100G-eSR4 specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-100G-eSR4
Part Number	02311PSH
Model	QSFP-100G-eSR4
Form factor	QSFP28
Application standard	100GBase-eSR4 (non-standard)

Item	Value
Connector type	MPO/PC (8-strand or 12-strand, type B, female connector)
Optical fiber type	MMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): 200 m Multimode fiber (OM4): 300 m
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	2.4 dBm
Minimum Tx optical power [dBm]	-8.4 dBm
Minimum extinction ratio [dB]	2 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-9.2 dBm
Overload power [dBm]	2.4 dBm

 **NOTE**

This module can only be used on a switch running V200R011C10 or a later version. A switch running an earlier version may fail to obtain information about this module.

## 10.19.5 QSFP28-100G-10KM

**Table 10-136** QSFP28-100G-10KM specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP28-100G-10KM
Part Number	02311SYT
Model	QSFP28-100G-10KM
Form factor	QSFP28
Application standard	100GBASE-LR4
Connector type	LC

Item	Value
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Single-mode fiber (G.652): 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1295 nm,1300 nm,1304 nm,1309 nm
Maximum Tx optical power [dBm]	4.5 dBm
Minimum Tx optical power [dBm]	-4.3 dBm
Minimum extinction ratio [dB]	4 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-8.6 dBm
Overload power [dBm]	4.5 dBm

## 10.19.6 QSFP28-100G-LR4 (02311KNU)

Table 10-137 QSFP28-100G-LR4 specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP28-100G-LR4
Part Number	02311KNU
Model	QSFP28-100G-LR4
Form factor	QSFP28
Application standard	100GBASE-LR4
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Single-mode fiber (G.652): 10 km

Item	Value
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1295 nm,1300 nm,1304 nm,1309 nm
Maximum Tx optical power [dBm]	4.5 dBm
Minimum Tx optical power [dBm]	-4.3 dBm
Minimum extinction ratio [dB]	4 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-8.6 dBm
Overload power [dBm]	4.5 dBm

## 10.19.7 QSFP28-100G-PSM4

**Table 10-138** QSFP28-100G-PSM4 specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP28-100G-PSM4
Part Number	02311MNM
Model	QSFP28-100G-PSM4
Form factor	QSFP28
Application standard	100GBASE-PSM4 (non-standard)
Connector type	MPO/APC (8-strand or 12-strand, type B, female connector)
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Single-mode fiber (G.652): 500 m
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	2 dBm
Minimum Tx optical power [dBm]	-9.4 dBm

Item	Value
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-11.35 dBm
Overload power [dBm]	2.2 dBm

## 10.19.8 QSFP28-100G-SR4 (02311GBW)

**Table 10-139** QSFP28-100G-SR4 specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP28-100G-SR4
Part Number	02311GBW
Model	QSFP28-100G-SR4
Form factor	QSFP28
Application standard	100GBASE-SR4
Connector type	MPO/PC (8-strand or 12-strand, type B, female connector)
Optical fiber type	MMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3): 70 m Multimode fiber (OM4): 100 m
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	2.4 dBm
Minimum Tx optical power [dBm]	-8.4 dBm
Minimum extinction ratio [dB]	2 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-8.5 dBm

Item	Value
Overload power [dBm]	2.4 dBm

## 10.19.9 QSFP-100G-ER4 (02313HLU)

**Table 10-140** QSFP-100G-ER4 specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-100G-ER4
Part Number	02313HLU
Model	QSFP-100G-ER4
Form factor	QSFP28
Application standard	100GBASE-ER4
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Single-mode fiber (G.652): 40 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1295 nm,1300 nm,1304 nm,1309 nm
Maximum Tx optical power [dBm]	2.9 dBm
Minimum Tx optical power [dBm]	-2.9 dBm
Minimum extinction ratio [dB]	8 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-20.9 dBm
Overload power [dBm]	-3.5 dBm
<b>NOTE</b> The RS-FEC function can be enabled.	

 NOTE

This module can only be used on a switch running V200R022C10 or a later version.

## 10.19.10 QSFP-100G-FR1

**Table 10-141** QSFP-100G-FR1 specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-100G-FR1
Part Number	02314BDE
Model	QSFP-100G-FR1
Form factor	QSFP28
Application standard	100GBASE-FR1
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Single-mode fiber (G.652, diameter: 9 μm): 2 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1311 nm
Maximum Tx optical power [dBm]	4 dBm
Minimum Tx optical power [dBm]	-3.1 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-7.1 dBm
Overload power [dBm]	4 dBm

 NOTE

This module can only be used on a switch running V200R022C10 or a later version.

## 10.19.11 QSFP28-100G-DR

**Table 10-142** QSFP28-100G-DR specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP28-100G-DR
Part Number	02312VSP
Model	QSFP28-100G-DR
Form factor	QSFP28
Application standard	100GBase-DR
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Single-mode fiber (G.652, diameter: 9 μm): 500 m
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1311 nm
Maximum Tx optical power [dBm]	4 dBm
Minimum Tx optical power [dBm]	-2.9 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-5.9 dBm
Overload power [dBm]	4 dBm

 **NOTE**

This module can only be used on a switch running V200R022C10 or a later version.



## 10.19.12 QSFP-100G-BIDI-G2

**Table 10-143** QSFP-100G-BIDI-G2 specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-100G-BIDI-G2
Part Number	02314DBW
Model	QSFP-100G-BIDI-G2
Form factor	QSFP28
Application standard	100G-BIDI
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Multimode fiber (OM3, diameter: 50 μm): 70 m Multimode fiber (OM4, diameter: 50 μm): 100 m
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850,910 nm
Maximum Tx optical power [dBm]	4 dBm
Minimum Tx optical power [dBm]	-4.4 dBm
Minimum extinction ratio [dB]	3 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	max (-6.6, SECQ - 8)
Overload power [dBm]	3.5 dBm

 **NOTE**

This module can only be used on a switch running V200R022C10 or a later version.

## 10.19.13 QSFP-100G-CWDM4-Lite

**Table 10-144** QSFP-100G-CWDM4-Lite specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-100G-CWDM4-Lite
Part Number	02312UJN
Model	QSFP-100G-CWDM4-Lite
Form factor	QSFP28
Application standard	100GBASE-CWDM4
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Single-mode fiber (G.652, diameter: 9 μm): 0.5 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	2.5 dBm
Minimum Tx optical power [dBm]	-6.5 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-9.8 dBm
Overload power [dBm]	2.5 dBm

 **NOTE**

This module can only be used on a switch running V200R022C10 or a later version.

## 10.19.14 QSFP-100G-LR1 (02314LBY)

**Table 10-145** QSFP-100G-LR1 specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-100G-LR1
Part Number	02314LBY
Model	QSFP-100G-LR1
Form factor	QSFP28
Application standard	100GBASE-LR1
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Single-mode (G.652) optical fiber (diameter: 9 μm): 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1311 nm
Maximum Tx optical power [dBm]	4.8 dBm
Minimum Tx optical power [dBm]	-1.9 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	Max(-6.1,TECQ-7.5)
Overload power [dBm]	4.8 dBm

 **NOTE**

This module can only be used on a switch running V200R023C00 or a later version.

## 10.19.15 QSFP-100G-SWDM4 (02314LCB)

**Table 10-146** QSFP-100G-SWDM4 specifications

Item	Value
<b>Basic Information</b>	
Module name	QSFP-100G-SWDM4
Part Number	02314LCB
Model	QSFP-100G-SWDM4
Form factor	QSFP28
Application standard	100G SWDM4 MSA
Connector type	LC
Optical fiber type	MMF
Working case temperature [°C(°F)]	0°C to 70°C (32°F to 158°F)
DDM options	Supported
Transmission rate [bit/s]	100 Gbit/s
Target transmission distance [km]	Multimode (OM3) optical fiber (diameter: 50 μm): 75 m Multimode (OM4) optical fiber (diameter: 50 μm): 100 m
Modal bandwidth [MHz*km]	Multimode (OM3) optical fiber: 2000 MHz*km Multimode (OM4) optical fiber: 4700 MHz*km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	850 nm
Maximum Tx optical power [dBm]	3.4 dBm
Minimum Tx optical power [dBm]	-7.5 dBm
Minimum extinction ratio [dB]	2 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-10.5 dBm
Overload power [dBm]	2.4 dBm

 **NOTE**

This module can only be used on a switch running V200R023C00 or a later version.

## 10.20 GPON Optical Modules

### 10.20.1 H87MMA5671A2

**Table 10-147** H87MMA5671A2 specifications

Item	Value
<b>Basic Information</b>	
Module name	H87MMA5671A2
Part Number	03031QHU
Model	H87MMA5671A2
Form factor	eSFP
Application standard	GPON CLASS B+
Connector type	SC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	Rx: 2.488 Gbit/s Tx: 1.244 Gbit/s
Target transmission distance [km]	Single-mode fiber: 20 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1490 nm (RX) 1310 nm (TX)
Maximum Tx optical power [dBm]	5.0 dBm
Minimum Tx optical power [dBm]	0.5 dBm
Minimum extinction ratio [dB]	10 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-27 dBm
Overload power [dBm]	-8.0 dBm
<b>NOTE</b> Ensure that the optical power is not too high. Otherwise, the optical module may be burnt. In practice, the maximum uplink service bandwidth is 1.1 Gbit/s and downlink service bandwidth is 2.3 Gbit/s.	

 NOTE

This module can only be used on a switch running V200R012C00 or a later version.

## 10.21 Optical Modules Dedicated for Hybrid Cables

### 10.21.1 SFP-10G-iLR-S

Table 10-148 SFP-10G-iLR-S specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-iLR-S
Part Number	02313CBJ
Model	SFP-10G-iLR-S
Form factor	SFP+
Application standard	10GBASE-iLR (non-standard)
Connector type	LC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40°F to +185°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode fiber: 1.4 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm

## 10.22 GE SFP Hybrid Modules

## 10.22.1 SFP-GE-Hybrid

**Table 10-149** SFP-GE-Hybrid specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-GE-Hybrid
Part Number	02313SGL
Model	SFP-GE-Hybrid
Form factor	eSFP, Hybrid
Application standard	1000base-LX
Connector type	PDLC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40.00°F to +185.00°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s
Target transmission distance [km]	Single-mode fiber: 10 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	-3 dBm
Minimum Tx optical power [dBm]	-9 dBm
Minimum extinction ratio [dB]	6 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-19.5 dBm
Overload power [dBm]	-3 dBm

## 10.23 2.5GE eSFP Hybrid Modules

## 10.23.1 SFP-2.5G-Hybrid-I

**Table 10-150** SFP-2.5G-Hybrid-I specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-2.5G-Hybrid-I
Part Number	02314LBJ
Model	SFP-2.5G-Hybrid-I
Form factor	eSFP, Hybrid
Application standard	1000BASE-LX/2.5G_iLR
Connector type	PDLC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40.00°F to +185.00°F)
DDM options	Supported
Transmission rate [bit/s]	1 Gbit/s 2.5 Gbit/s
Target transmission distance [km]	Single-mode optical fiber: 1.4 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-12.6 dBm
Overload power [dBm]	0.5 dBm

 **NOTE**

This module can only be used on a switch running V200R023C00 or a later version.

## 10.24 10GE SFP+ Hybrid Modules



## 10.24.1 SFP-10G-Hybrid

**Table 10-151** SFP-10G-Hybrid specifications

Item	Value
<b>Basic Information</b>	
Module name	SFP-10G-Hybrid
Part Number	02313SGK
Model	SFP-10G-Hybrid
Form factor	SFP+,Hybrid
Application standard	10GBASE-iLR
Connector type	PDLC
Optical fiber type	SMF
Working case temperature [°C(°F)]	-40°C to +85°C (-40.00°F to +185.00°F)
DDM options	Supported
Transmission rate [bit/s]	10 Gbit/s
Target transmission distance [km]	Single-mode optical fiber: 1.4 km
<b>Transmitter Optical Characteristics</b>	
Center wavelength [nm]	1310 nm
Maximum Tx optical power [dBm]	0.5 dBm
Minimum Tx optical power [dBm]	-8.2 dBm
Minimum extinction ratio [dB]	3.5 dB
<b>Receiver Optical Characteristics</b>	
Rx sensitivity [dBm]	-14.4 dBm
Overload power [dBm]	0.5 dBm

# 11 Accessories

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- [11.1 SSD-240GB \(240 GB SSD Card\)](#)
- [11.2 WLA220W01-20 kA Surge Protector](#)
- [11.3 OADM Combiner and Circulator](#)
- [11.4 HCDF48PDLC00 \(48-Port Hybrid Cable Distribution Frame\)](#)
- [11.5 S5700-48U-NDF](#)
- [11.6 Hybrid Cable Terminal Boxes](#)

## 11.1 SSD-240GB (240 GB SSD Card)

### Version Mapping

**Table 11-1** lists the mapping between the SSD-240GB card and software versions.

**Table 11-1** Version mapping

Card Model	Software Version
SSD-240GB	V200R012C00 to V200R019C10 versions

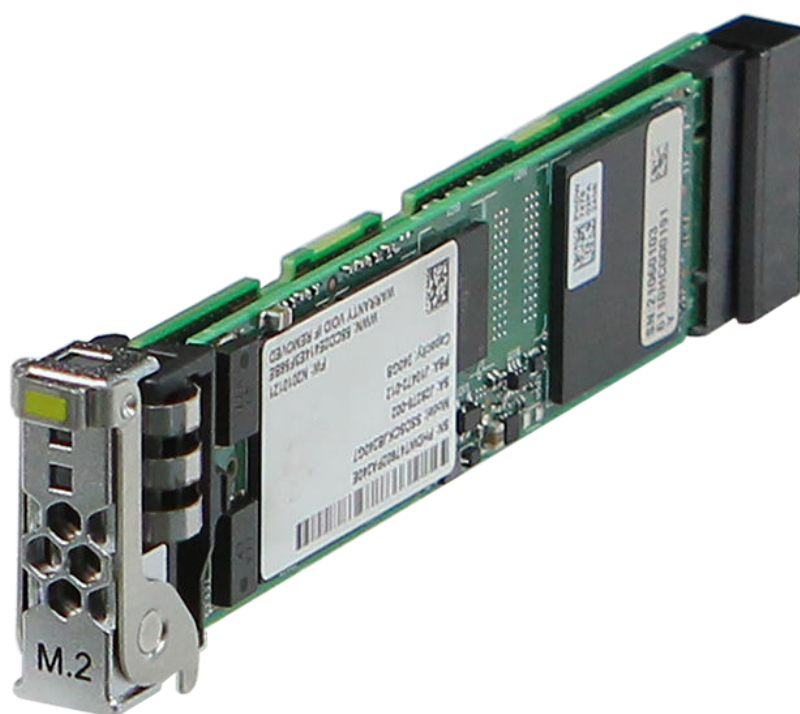
### Card Overview

The SSD-240GB can be installed in the SSD card slot at the rear of the S5730-HI.

**Table 11-2** Applicable switch models

Card	Switch Model
SSD-240GB	<ul style="list-style-type: none"> <li>• S5730-36C-HI</li> <li>• S5730-36C-PWH-HI</li> <li>• S5730-60C-HI</li> <li>• S5730-60C-PWH-HI</li> <li>• S5730-36C-HI-24S</li> <li>• S5730-60C-HI-48S</li> </ul>

**Figure 11-1** SSD-240GB appearance



## Functions

**Table 11-3** Functions

Function	Description
Storage space	240 GB <b>NOTE</b> You can only use the <b>display version</b> command to view the storage space of a solid-state drive (SSD), and use the <b>format ssd</b> command to format the SSD.

Function	Description
Hot swapping	Not supported

## Indicator Description

Figure 11-2 Indicators on the SSD-240GB

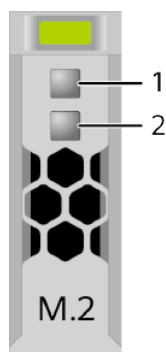


Table 11-4 Indicator description

No.	Indicator	Color	Description
1	Fault indicator	Off	The SSD card is running properly.
		Yellow	Steady on: The SSD card cannot be detected or fails.
2	Active indicator	Off	The SSD card is not in position or fails.
		Green	<ul style="list-style-type: none"> <li>Steady on: The SSD card is in inactive state.</li> <li>Blinking: The SSD card is being read, written to, or synchronized with.</li> </ul>

## Technical Specifications

**Table 11-5** Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> <li>• Dimensions (H x W x D): 25 mm x 8 mm x 110 mm (0.98 in. x 0.31 in. x 4.33 in.)</li> <li>• Weight: 0.1 kg (0.22 lb)</li> <li>• Maximum power consumption: 3.5 W</li> </ul>
Environment specifications	<ul style="list-style-type: none"> <li>• Operating temperature: 0°C to 45°C (32°F to 113°F)</li> <li>• Relative humidity: 5% RH to 95% RH</li> <li>• Storage temperature: -40°C to +70°C (-40°F to +158°F)</li> </ul>

## Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

**Table 11-6** provides the SSD-240GB ordering information.

**Table 11-6** Ordering information

Card Description	Card Name	Part Number
240 GB SSD card	SSD-240GB	03032TXD

## 11.2 WLA220W01-20 kA Surge Protector

### Overview

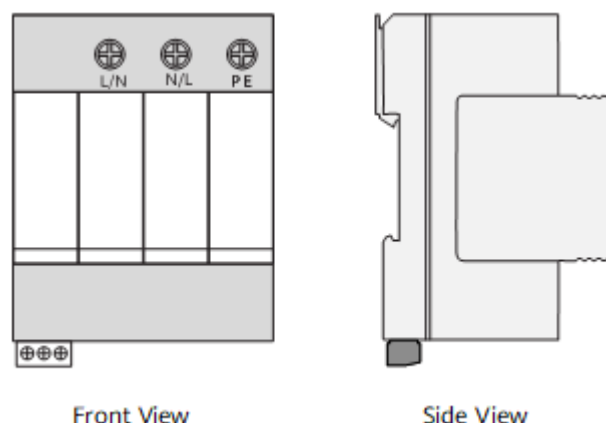
A 20 kA surge protector (model: WLA220W01) protects the 220 V single-phase power system and powered devices against the surge voltage caused by lightning strikes.

### Appearance

A 20 kA surge protector uses an integrated base to facilitate installation and maintenance, and provides an alarm port (dry contact point) for remote monitoring.

**Figure 11-3** shows the appearance of a 20 kA surge protector.

**Figure 11-3** Appearance of a 20 kA surge protector



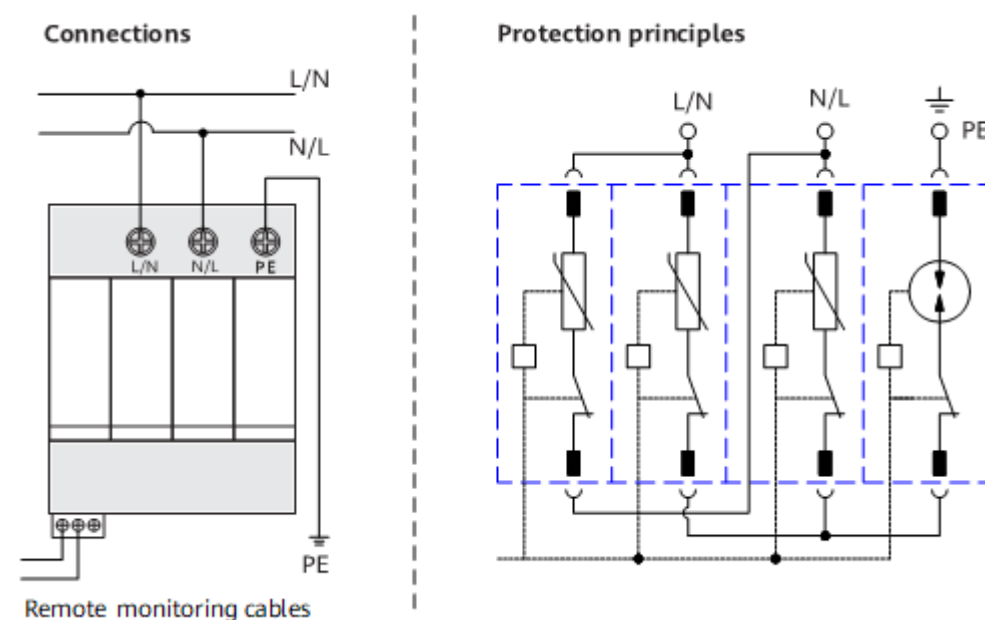
## Principles

A 20 kA surge protector uses the 3+1 protection circuit and provides overheat and overcurrent protection. When the surge protector fails, it is automatically disconnected from the power grid to avoid fire caused by a short circuit.

When the status indication window of a surge protector is red, the surge protector fails and must be replaced immediately. If a remote alarm buzzer is connected to the surge protector, the alarm buzzer will generate alarm signals.

**Figure 11-4** shows the protection principles of a 20 kA surge protector.

**Figure 11-4** Protection principles of a 20 kA surge protector



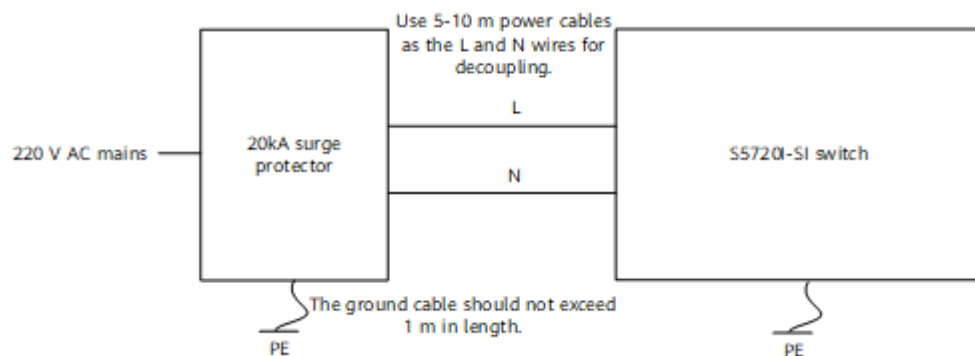
## Application Scenario

When the S5720I-SI series switches are installed in outdoor cabinets, 20 kA surge protectors must be used in some scenarios. Ensure that the following requirements are met:

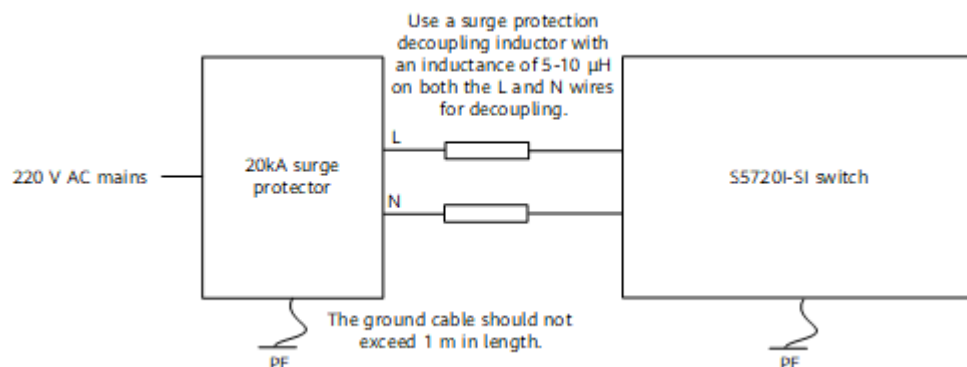
- AC switch:
  - If the 220 V mains supply is used, install a 20 kA surge protector between the power port of the switch and the mains.
  - If power is supplied by an isolated inverter near the outdoor cabinet, no surge protector needs to be installed between the power port of the switch and the inverter.
- DC switch: An isolated power supply must be used and placed in the same outdoor cabinet as the switch. Surge protection is required for the power input of the outdoor cabinet. The surge protector, power supply, and switch must be equipotential. The outdoor cabinet must be properly grounded and the grounding impedance must be less than or equal to 10 ohms. If a DC switch is connected to the PAC-260WA-E or PAC240S56-CN power module that is powered by the 220 V mains, install a 20 kA surge protector between the power input port of the PAC-260WA-E or PAC240S56-CN and the mains.

The 20 kA surge protector and S5720I-SI switch can be decoupled using 5-10 m power cables or decoupling inductors, as shown in [Figure 11-5](#) and [Figure 11-6](#).

**Figure 11-5** Using 5-10 m power cables for decoupling



**Figure 11-6** Using decoupling inductors for decoupling



**NOTE**

- The recommended cross-sectional area of a live wire/neutral wire (L/N) power cable for decoupling is 1.25 mm<sup>2</sup>.
- The cross-sectional area of a PE ground cable must be greater than or equal to 16 mm<sup>2</sup>.
- If there is no space for placing 5-10 m power cables in the cabinet for decoupling, install a hollow-core surge protection decoupling inductor with an inductance of 5-10 μH on both the L and N wires. The decoupling inductors need to be purchased separately.

## Specifications

**Table 11-7** lists the specifications of a 20 kA surge protector.

**Table 11-7** Specifications of a 20 kA surge protector

Item	Description
Dimensions (H x W x D)	72 mm x 90 mm x 65 mm (2.83 in. x 3.54 in. x 2.56 in.)
Nominal voltage	220 V AC
Maximum continuous operating voltage ( $U_c$ )	385 V AC
Maximum discharge current ( $I_{max}$ )	40 kA (8/20 μs)
Nominal discharge current ( $I_n$ )	20 kA (8/20 μs)
Protection level ( $U_p$ )	1.8 kV
Status indication window (four red/green bi-color windows)	<ul style="list-style-type: none"> <li>• Green: normal state</li> <li>• Red: failure</li> </ul>
Part number	19020062

## 11.3 OADM Combiner and Circulator

### Overview

The optical add/drop multiplexer (OADM) combiner can be logically divided into a transmit device and a receive device, which work together to add/drop fixed wavelengths to/from the multiplexed signals. The OADM combiner features low insertion loss, flexible capacity expansion, and low cost, reducing the usage of long-distance optical fibers.

A circulator is used with an OADM combiner. The circulator can separate signals from each other by implementing unidirectional transmission of high-frequency signals and controlling the transmission of optical waves along a certain ring.

The OADM combiner and circulator are passive devices (can be used without power supply). **Table 11-8** lists the models of OADM combiners and circulators.



**Table 11-8** OADM combiner and circulator

Type	Model	Description
OADM combiner	OADM-OC-00	OADM module - 18 channels - indoor - integrated circulator
OADM combiner	OADM-00-00	OADM module - 18 channels - outdoor
Circulator	OC-1270-1380-00	Optical circulator - 1270 nm - 1380 nm
Circulator	OC-1381-1500-00	Optical circulator - 1381 nm - 1500 nm
Circulator	OC-1501-1620-00	Optical circulator - 1501 nm - 1620 nm

## Appearance

**Figure 11-7** and **Figure 11-8** shows the appearances of the OADM combiner.

**Figure 11-7** Appearance of the OADM combiner (OADM-OC-00)



**Figure 11-8** Appearance of the OADM combiner (OADM-00-00)



**Figure 11-9** shows the appearance of a circulator.

**Figure 11-9** Appearance of the circulator



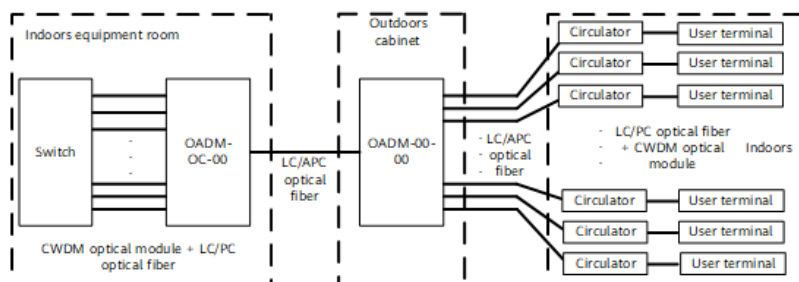
**NOTE**

Except for having different nameplates on the bottom surface, the three types of circulators have the same appearance.

## Application Scenario

The OADM combiner and circulator are mainly used between switches and end users. They are used with GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario) to implement GE fiber to the home (FTTH).

**Figure 11-10** Typical application scenario of OADM combiners and circulators

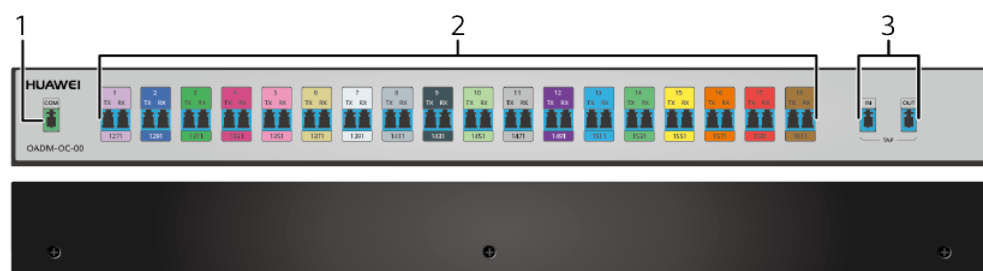


The following lists the cable requirements for connections of devices and components:

- The switch and OADM-OC-00 are installed in the indoor equipment room: The switch is connected to the combiner using the CWDM optical module, and the LC/PC optical fiber is used.
- The OADM-00-00 is installed in an outdoor cabinet near the user side: The OADM-00-00 and OADM-OC-00 are connected through a long-distance LC/APC optical fiber, reducing the number of long-distance optical fibers.
- The circulators are installed indoors: The circulators are connected to the OADM-00-00 using LC/APC optical fibers.
- The CWDM optical modules are installed on the user terminals: The CWDM optical modules are connected to circulators using LC/PC optical fibers.

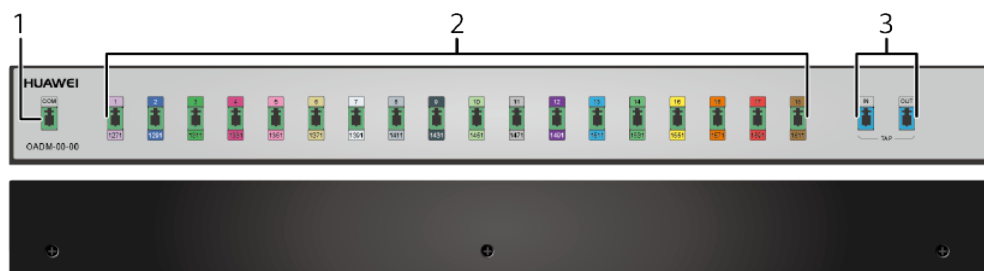
## Port Description

**Figure 11-11** Ports on the OADM-OC-00



1	<p>COM port</p> <p><b>NOTE</b></p> <p>The combination port of the OADM-OC-00 is connected to that of the OADM-00-00 using the LC/APC optical fiber.</p>	2	<p>18-channel optical ports with different wavelengths</p> <p><b>NOTE</b></p> <p>The 18-channel optical ports are connected to CWDM optical modules on the switches using the LC/PC optical fibers.</p> <p>The wavelength ID on the interface must match that of the optical module.</p> <p>The TX port is connected to the RX port on the CWDM optical module, and the RX port is connected to the TX port on the CWDM optical module.</p>
3	<p>TAP port</p> <p><b>NOTE</b></p> <p>The detection ports are connected using the LC/PC optical fibers. The IN port is used to detect 18-channel CWDM optical paths, and the OUT port is used to detect the optical path on the COM port.</p>	-	-

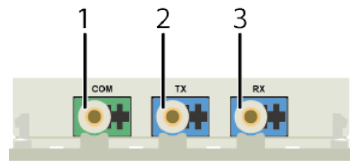
Figure 11-12 Ports on the OADM-00-00



1	<p>COM port</p> <p><b>NOTE</b></p> <p>The combination port of the OADM-00-00 is connected to that of the OADM-OC-00 using the LC/APC optical fiber.</p>	2	<p>18-channel optical ports with different wavelengths</p> <p><b>NOTE</b></p> <p>The optical ports are connected to the user-side circulators using LC/APC optical fibers.</p> <p>The wavelength ID on the interface must match that of the circulator.</p>
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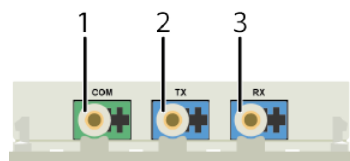
3	<p><b>TAP port</b></p> <p><b>NOTE</b></p> <p>The detection ports are connected using the LC/PC optical fibers. The IN port is used to detect 18-channel CWDM optical paths, and the OUT port is used to detect the optical path on the COM port.</p>	-	-
---	--	---	---

**Figure 11-13** Ports on the OC-1270-1380-00



1	<p><b>COM port</b></p> <p><b>NOTE</b></p> <p>This port can be connected to the 1271, 1291, 1311, 1331, 1351, and 1371 ports of the OADM-00-00 using the LC/APC optical fibers.</p>	2	<p><b>TX port</b></p> <p><b>NOTE</b></p> <p>This port is connected to the RX port of the CWDM optical module using the LC/PC optical fiber.</p>
3	<p><b>RX port</b></p> <p><b>NOTE</b></p> <p>This port is connected to the TX port of the CWDM optical module using the LC/PC optical fiber.</p>	-	-

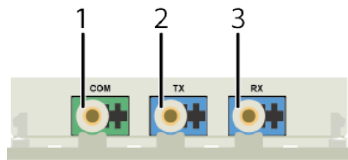
**Figure 11-14** Ports on the OC-1381-1500-00



1	<p><b>COM port</b></p> <p><b>NOTE</b></p> <p>This port can be connected to the 1391, 1411, 1431, 1451, 1471, and 1491 ports of the OADM-00-00 using the LC/APC optical fibers.</p>	2	<p><b>TX port</b></p> <p><b>NOTE</b></p> <p>This port is connected to the RX port of the CWDM optical module using the LC/PC optical fiber.</p>
---	--	---	---

3	RX port  <b>NOTE</b> This port is connected to the TX port of the CWDM optical module using the LC/PC optical fiber.	-	-
---	---	---	---

**Figure 11-15** Ports on the OC-1501-1620-00



1	COM port  <b>NOTE</b> This port can be connected to the 1511, 1531, 1551, 1571, 1591, and 1611 ports of the OADM-00-00 using the LC/APC optical fibers.	2	TX port  <b>NOTE</b> This port is connected to the RX port of the CWDM optical module using the LC/PC optical fiber.
3	RX port  <b>NOTE</b> This port is connected to the TX port of the CWDM optical module using the LC/PC optical fiber.	-	-

**NOTE**

If no port is used, cover ports with dust plugs.

## Technical Specifications

**Table 11-9** lists technical specifications of OADM combiners and circulators.

**Table 11-9** Technical specifications

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>● OADM-OC-00: 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.)</li> <li>● OADM-00-00: 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.)</li> <li>● OC-1270-1380-00: 14 mm x 60.0 mm x 115.0 mm (0.55 in. x 2.36 in. x 4.53 in.)</li> <li>● OC-1381-1500-00: 14 mm x 60.0 mm x 115.0 mm (0.55 in. x 2.36 in. x 4.53 in.)</li> <li>● OC-1501-1620-00: 14 mm x 60.0 mm x 115.0 mm (0.55 in. x 2.36 in. x 4.53 in.)</li> </ul>
Operating temperature	<ul style="list-style-type: none"> <li>● OADM-OC-00: -5°C to +55°C (23°F to 131°F) at an altitude of 0-2000 m (0-6562 ft.)</li> <li>● OADM-00-00: -40°C to +70°C (-40°F to +158°F) at an altitude of 0-2000 m (0-6562 ft.)</li> <li>● OC-1270-1380-00: -5°C to +55°C (23°F to 131°F) at an altitude of 0-2000 m (0-6562 ft.)</li> <li>● OC-1381-1500-00: -5°C to +55°C (23°F to 131°F) at an altitude of 0-2000 m (0-6562 ft.)</li> <li>● OC-1501-1620-00: -5°C to +55°C (23°F to 131°F) at an altitude of 0-2000 m (0-6562 ft.)</li> </ul>
Storage temperature	-40°C to +85°C (-40°F to +185°F)
Relative humidity	5% to 95%, noncondensing
Device attribute	Passive
Supported CWDM wavelength (nm)	<ul style="list-style-type: none"> <li>● OADM-OC-00: 1271/1291/1311/1331/1351/1371/1391/1411/1431/1451/1471/1491/1511/1531/1551/1571/1591/1611</li> <li>● OADM-00-00: 1271/1291/1311/1331/1351/1371/1391/1411/1431/1451/1471/1491/1511/1531/1551/1571/1591/1611</li> <li>● OC-1270-1380-00: 1271/1291/1311/1331/1351/1371</li> <li>● OC-1381-1500-00: 1391/1411/1431/1451/1471/1491</li> <li>● OC-1501-1620-00: 1511/1531/1551/1571/1591/1611</li> </ul>
Part number	<ul style="list-style-type: none"> <li>● OADM-OC-00: 45020427</li> <li>● OADM-00-00: 45020428</li> <li>● OC-1270-1380-00: 45090008</li> <li>● OC-1381-1500-00: 45090009</li> <li>● OC-1501-1620-00: 45090010</li> </ul>

## 11.4 HCDF48PDLC00 (48-Port Hybrid Cable Distribution Frame)

### Overview

HCDF48PDLC00 is a hybrid cable distribution frame (HDF) used to route hybrid cables for S series hybrid optical-electrical switches. One end of a hybrid cable is connected to an AP or a remote unit, and the other end is connected to a hybrid optical-electrical switch through a fiber jumper, facilitating line connection, distribution, and scheduling.

The HDF is a passive device and can be used with no power input.

### Appearance

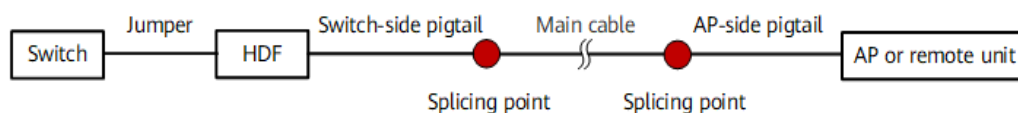
Figure 11-16 HCDF48PDLC00 appearance



### Application Scenario

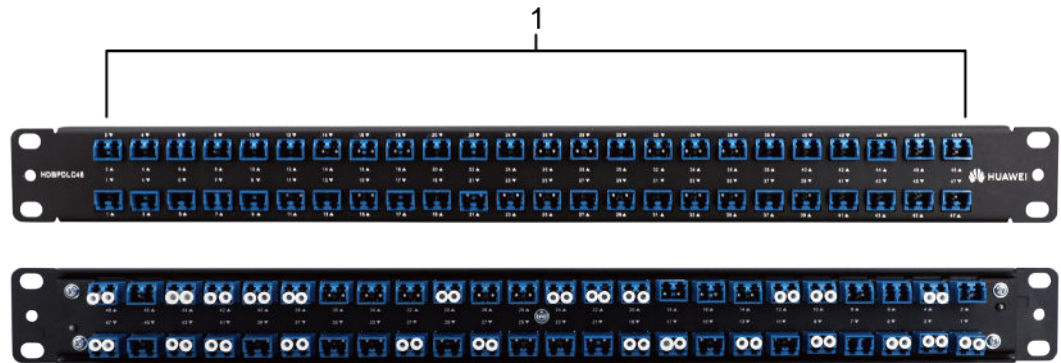
**With an HDF deployed:** One end of a hybrid cable 1.0 is connected to a hybrid optical-electrical port on a switch through a fiber jumper, and the other end is connected to a hybrid optical-electrical port on the HDF. When it comes to hybrid cable 2.0, one end of the cable is connected to a hybrid optical-electrical port on the HDF, and the other end is connected to a hybrid optical-electrical port on an AP or remote unit.

Figure 11-17 Connection diagram with an HDF deployed



## Port Description

**Figure 11-18** Ports on the HCDF48PDLC00



1. 48 x hybrid optical-electrical ports

### NOTE

When routing cables, ensure that the port in use on the front side of the HDF has the same port number as that in use on the rear side of the HDF.

Cover unused ports with dust plugs.

## Technical Specifications

**Table 11-10** Technical specifications of the HCDF48PDLC00

Item	Description
Dimensions without packaging (H x W x D) [mm]	43.6 mm x 482.6 mm x 35.2 mm
Weight without packaging	1.0 kg
Component attribute	Passive
Number of ports	<ul style="list-style-type: none"> <li>● Front: 48</li> <li>● Rear: 48</li> </ul>
Port connector type	PDLC
Part number	98011935
Model	HCDF48PDLC00
Silkscreen	HDBPDLC48



Item	Description
Description	HCDF48PDLC00 (48-port hybrid cable distribution frame)

## 11.5 S5700-48U-NDF

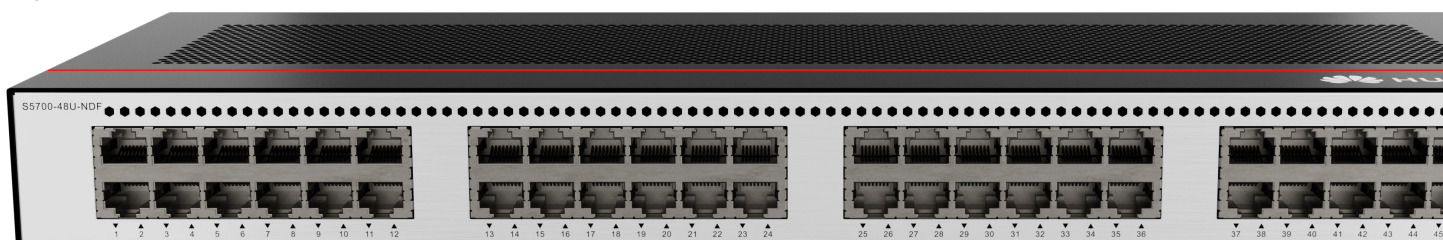
### Overview

**Table 11-11** Basic information about the S5700-48U-NDF

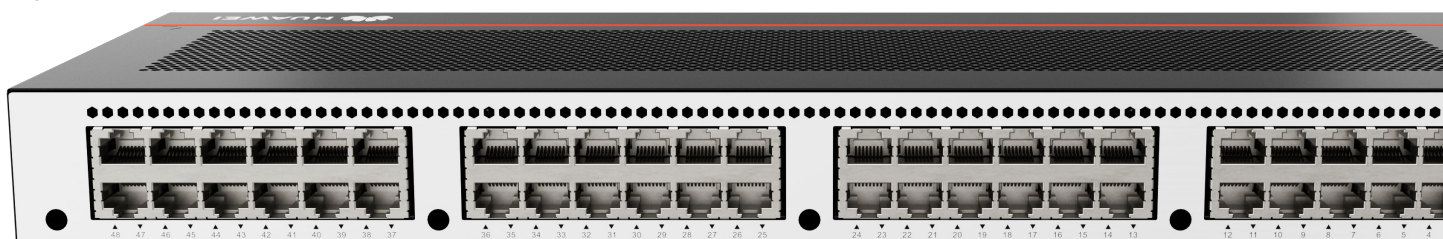
Item	Details
Description	S5700-48U-NDF (Network isolated distribution frame, 48*10/100/1000BASE-T ports, PoE++)
Part Number	98012291
Model	S5700-48U-NDF
Other part numbers	<ul style="list-style-type: none"> <li>Maximum power of each port: 45 W @ 45°C; 30 W @ 60°C</li> <li>If the S5700-48U-NDF is deployed between two devices, the total length of the Ethernet cables for connecting to the two devices cannot exceed 80 m.</li> </ul>

### Appearance

**Figure 11-19** Front view of S5700-48U-NDF



**Figure 11-20** Rear view of S5700-48U-NDF



## Ports

**Table 11-12** Ports on the S5700-48U-NDF

Port	Connector Type	Description	Available Components
10/100/1000BASE -T port	RJ45	A 10/100/1000BASE -T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s.  The port supports PoE/PoE+/PoE++ transparent transmission of a maximum of 45 W.	<a href="#">Ethernet cable</a>

## Power Supply System

The S5700-48U-NDF is connected between two switches or between a PoE switch and a PD for isolation protection. When the S5700-48U-NDF is used between a PoE switch and a PD, each port supports PoE/PoE+/PoE++ transparent transmission of a maximum of 30 W (at an ambient temperature of 60°C) or 45 W (at an ambient temperature of 45°C). The ports on the S5700-48U-NDF do not distinguish the input end and input end. You only need to connect the ports on both ends of the S5700-48U-NDF to the ports with the same number.

## Heat Dissipation System

The device has no fans and uses natural heat dissipation.

## Technical Specifications

**Table 11-13** Technical specifications of the S5700-48U-NDF

Item	Specification
Dimensions without packaging (H x W x D) [mm(in.)]	Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 160.0 mm (1.72 in. x 17.4 in. x 6.3 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 166.0 mm (1.72 in. x 17.4 in. x 6.54 in.)
Dimensions with packaging (H x W x D) [mm(in.)]	90.0 mm x 550.0 mm x 360.0 mm (3.54 in. x 21.65 in. x 14.17 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.00 kg (4.41 lb)
Weight with packaging [kg(lb)]	2.43 kg (5.36 lb)
Typical power consumption [W]	-
Typical heat dissipation [BTU/hour]	-
Maximum power consumption [W]	-
Maximum heat dissipation [BTU/hour]	-
Static power consumption [W]	-
MTBF [years]	48.14 years
MTTR [hours]	2 hours
Availability	> 0.99999
Noise at normal temperature (acoustic power) [dB(A)]	Noise-free (no fans), < 20
Noise at normal temperature (acoustic pressure) [dB(A)]	Noise-free (no fans), < 20
Number of card slots	0
Number of power slots	0
Number of fans modules	0
Redundant power supply	Not supported
Long-term operating temperature [°C(°F)]	-40°C to 60°C (-40°F to 140°F) at an altitude of 0-1800 m (0-5906 ft.)

Item	Specification
Restriction on the operating temperature variation rate [°C(°F)]	When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature [°C(°F)]	-40°C to +70°C (-40°F to +158°F)
Long-term operating relative humidity [RH]	5% RH to 95% RH (non-condensing)
Long-term operating altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Storage altitude [m(ft.)]	0-5000 m (0-16404 ft.)
Power supply mode	PoE_IN
Rated input voltage [V]	PoE input: 56 V DC
Input voltage range [V]	AF PoE input: 46 V DC to 57 V DC AT PoE input: 52 V DC to 57 V DC BT PoE input: 54 V DC to 57 V DC
Maximum input current [A]	Maximum input current of each port: 0.8 A
Memory	-
Flash memory	-
Storage	-
Console port	-
Eth Management port	-
USB	Not supported
RTC	Not supported
RPS input	Not supported
Service port surge protection [kV]	Common mode: ±6 kV
Power supply surge protection [kV]	-
Ingress protection level (dustproof/waterproof)	IP20
Types of fans	None
Heat dissipation mode	Natural heat dissipation
Airflow direction	-
PoE	Supported

Item	Specification
Certification	EMC certification Safety certification Manufacturing certification

## 11.6 Hybrid Cable Terminal Boxes

### 11.6.1 ES5MFMT00000

#### Overview

ES5MFMT00000 is a 24-port hybrid cable terminal box, which offers 24 PDLC optical-electrical adapters and is applicable to optical-electrical integration and optical-electrical separation scenarios.

#### Appearance

Figure 11-21 Appearance of the ES5MFMT00000 terminal box (without the cover)



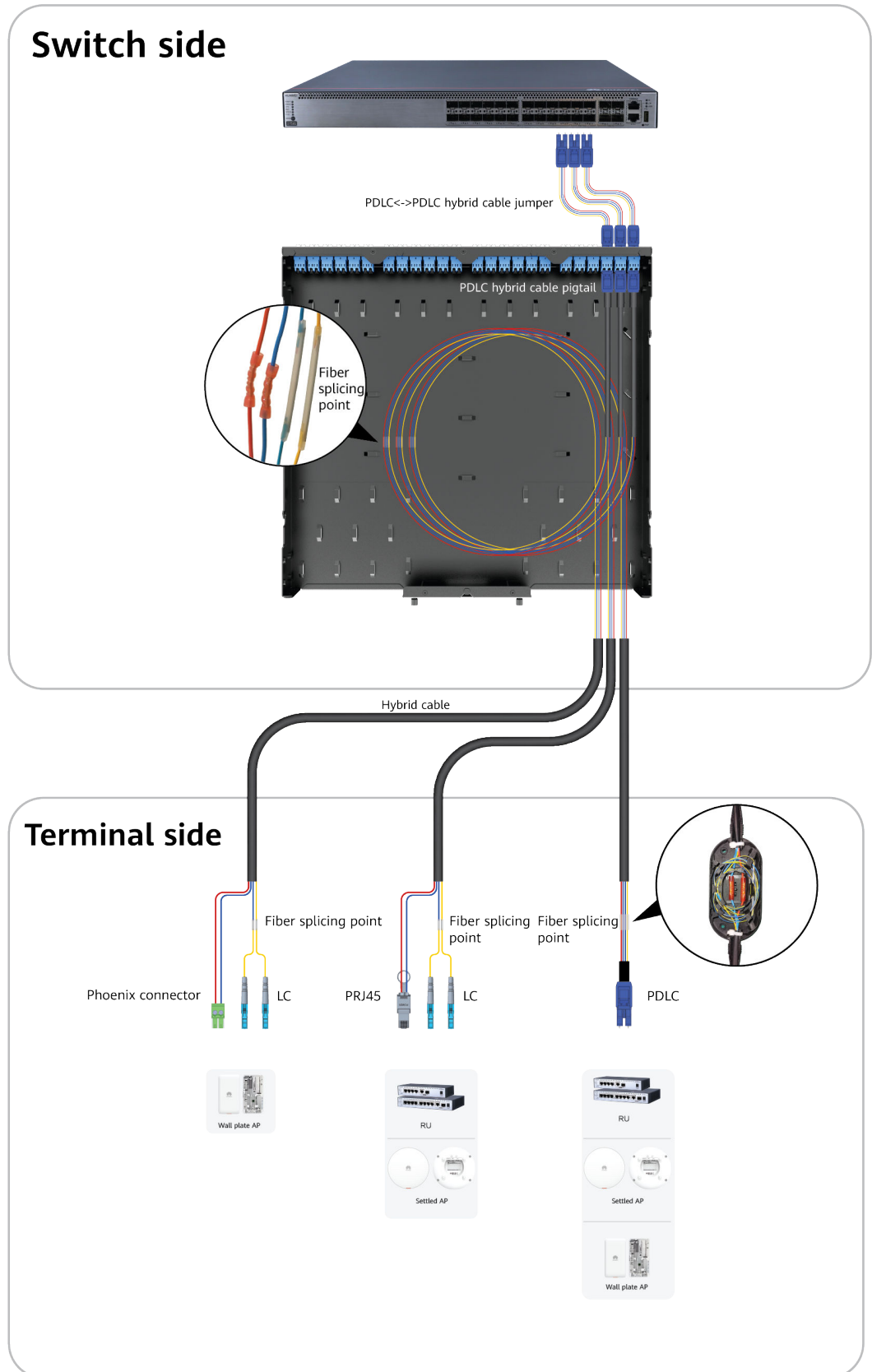
#### Cable Connections

The ES5MFMT00000 terminal box can be used with S5731-H and S5731S-H hybrid optical-electrical switches in optical-electrical integration scenarios and S5732-H hybrid optical-electrical switches in optical-electrical separation scenarios.

#### **Auxiliary components such as devices and cables related to the ES5MFMT00000 terminal box in optical-electrical integration scenarios:**

- S5731-H and S5731S-H hybrid optical-electrical switches
- ES5MFMT00000 terminal box
- Main cable of the hybrid cable
- PDLC hybrid cable pigtail (used inside the terminal box, not included in the terminal box)
- PDLC<->PDLC hybrid cable jumper (used outside the terminal box, not included in the terminal box)

**Figure 11-22** Connections of the ES5MFMT00000 terminal box (optical-electrical integration scenario)



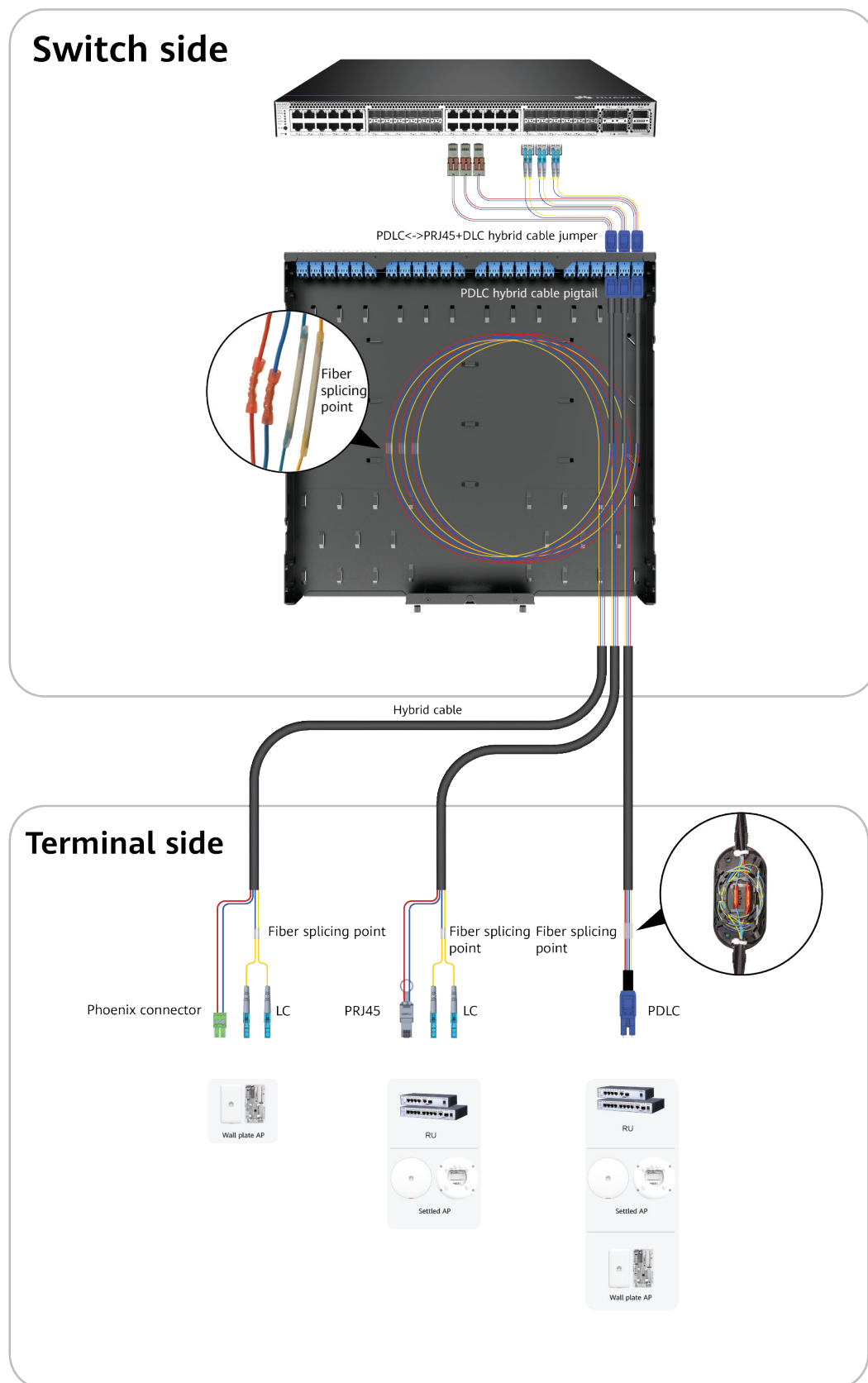
**Connection instructions:**

- Inside the terminal box:
  - Splice the main cable of the hybrid cable with the PDLC hybrid cable pigtail, connect the PDLC connector of the pigtail to the front panel of the terminal box, and coil the spliced cable inside the terminal box.
- Outside the terminal box:
  - Connect the front panel of the terminal box to the hybrid optical-electrical port on the S5731-H and S5731S-H hybrid optical-electrical switches through the PDLC<->PDLC hybrid cable jumper.

**Auxiliary components such as devices and cables related to the ES5MFMT00000 terminal box in optical-electrical separation scenarios:**

- S5732-H hybrid optical-electrical switch
- ES5MFMT00000 terminal box
- Main cable of the hybrid cable
- PDLC hybrid cable pigtail (used inside the terminal box, not included in the terminal box)
- PDLC<->PRJ45+DLC hybrid cable jumper (used outside the terminal box, not included in the terminal box)

**Figure 11-23** Connections of the ES5MFMT00000 terminal box (optical-electrical separation scenario)





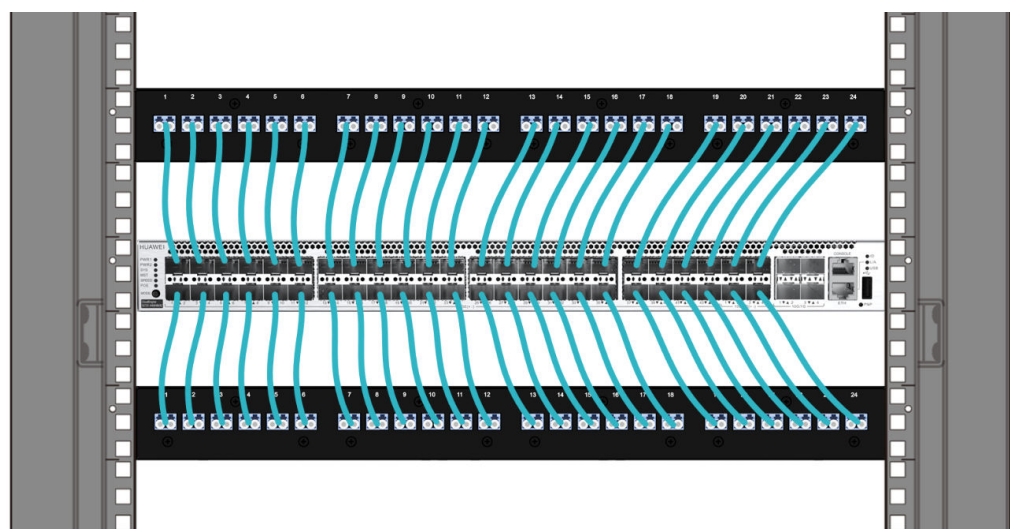
### Connection instructions:

- Inside the terminal box:
  - Splice the main cable of the hybrid cable with the PDLC hybrid cable pigtail, connect the PDLC connector of the pigtail to the front panel of the terminal box, and coil the spliced cable inside the terminal box.
- Outside the terminal box:
  - Connect the front panel of the terminal box to the hybrid optical-electrical port of the S5732-H hybrid optical-electrical switch through a PDLC<->PRJ45+DLC hybrid cable jumper.

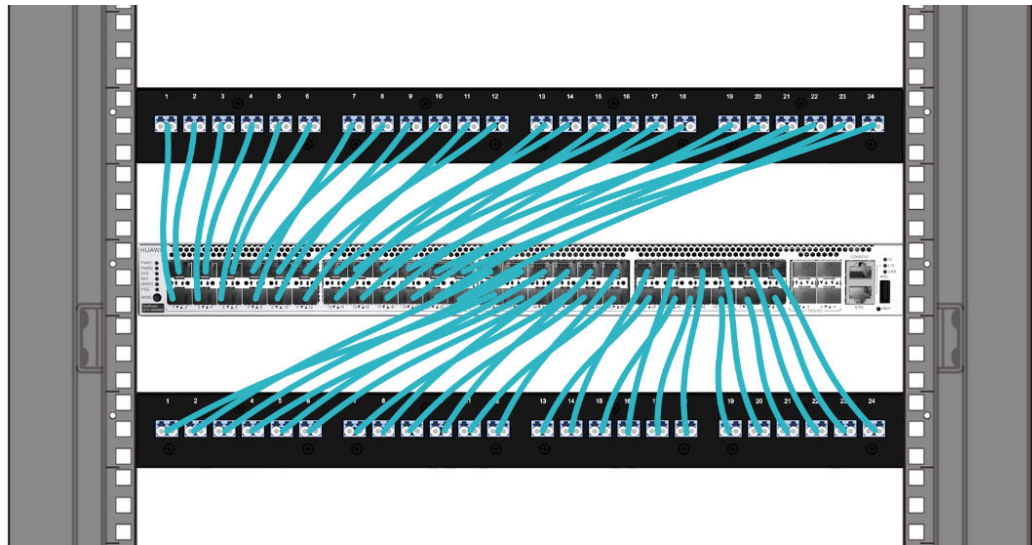
### NOTE

- One terminal box can house a maximum of 24 hybrid cables. If a 48-port hybrid optical-electrical switch is used, two terminal boxes are required.
- Strip the sheath of the hybrid cables inside the terminal box. The stripping start position depends on the installation position of the terminal box in the cabinet. It is recommended that hybrid cables be stripped for a maximum of 1 m to 2.5 m, starting from at least 1 U higher or lower than the terminal box, depending on whether hybrid cables are routed from the top or bottom. When fiber splicing conditions permit, hybrid cables should be stripped as short as possible. If there are a large number of hybrid cables in the cabinet, you are advised to strip the sheath of hybrid cables before routing them into the cabinet.
- A hybrid cable may contain fire-retardant and lubrication materials, such as mica or talcum powder. Dust may be generated when the cable sheath is stripped. Therefore, you are advised to take protective measures, such as wearing gloves and masks.
- For details about the splicing and connection of a hybrid cable, see [\(Video\) Hybrid Cable 1.0 Assembly and Connection Guide](#) and [\(Video\) Hybrid Cable 2.0 Assembly and Connection Guide](#).
- When a terminal box is used, no splicing protection tube is required for the optical fiber splicing part.
- It is recommended that the distance between the switch and a terminal box be at least 1 U.

**Figure 11-24** Cable connections between a 48-port hybrid optical-electrical switch and two terminal boxes (based on the cabling distance, recommended)



**Figure 11-25** Connections between a 48-port hybrid optical-electrical switch and two terminal boxes (based on port numbers)



## Technical Specifications

**Table 11-14** Technical specifications

Item	Description
Model	ES5MFMT00000
Description	24-port hybrid cable terminal box (with 24 PDLC optical-electrical adapters, applicable to optical-electrical integration scenarios)
Part number	98012287
Dimensions without packaging (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.54 in.)
Height	1 U

### 11.6.2 ES5MFMT00001

#### Overview

ES5MFMT00001 is a 24-port hybrid cable terminal box, which offers 24 empty ports but no PDLC optical-electrical adapters and is applicable to optical-electrical integration and optical-electrical separation scenarios.

## Appearance

**Figure 11-26** Appearance of the ES5MFMT00001 terminal box (without the cover)



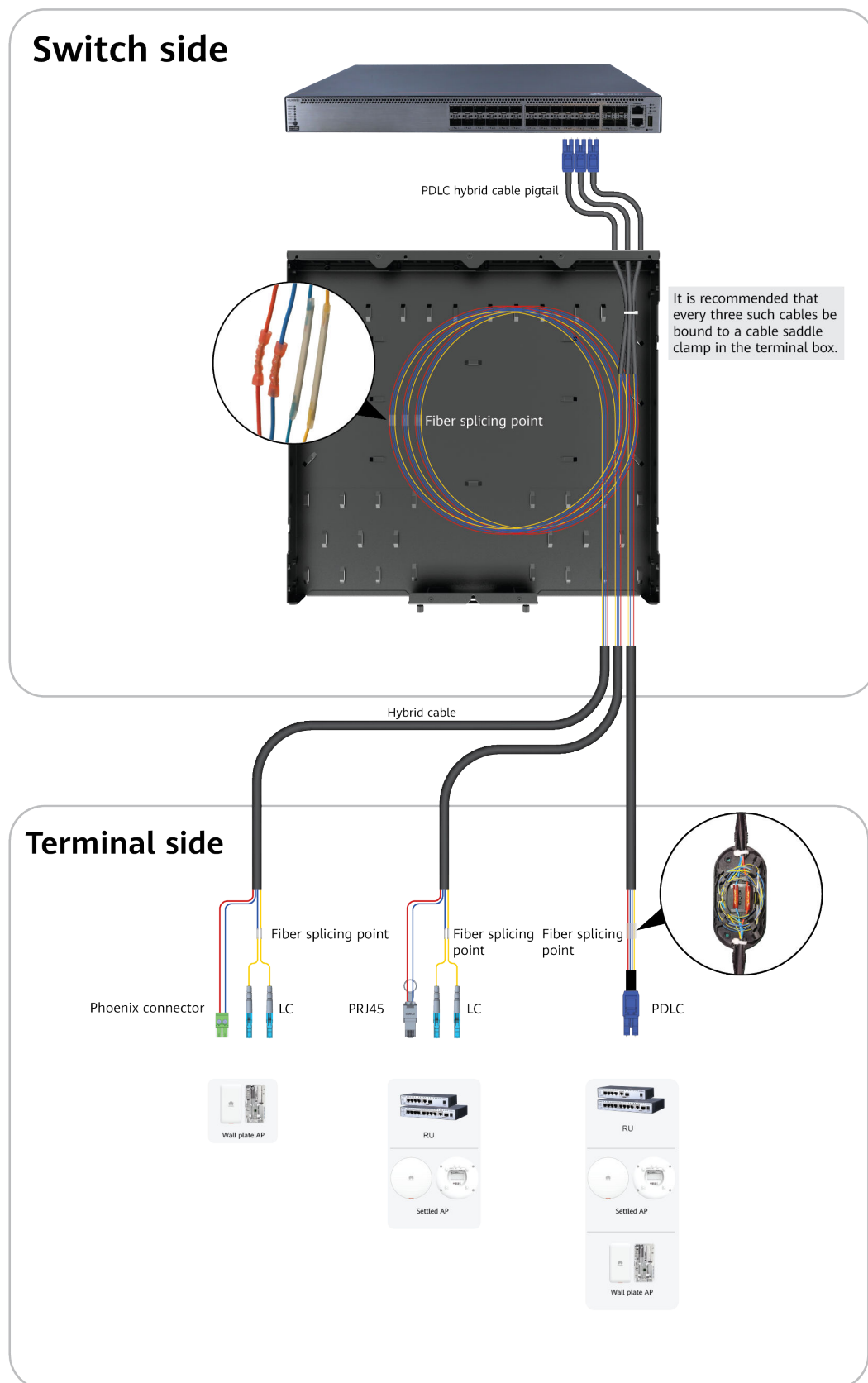
## Cable Connections

The ES5MFMT00001 terminal box can be used with S5731-H and S5731S-H hybrid optical-electrical switches in optical-electrical integration scenarios and S5732-H hybrid optical-electrical switches in optical-electrical separation scenarios.

**Auxiliary components such as devices and cables related to the ES5MFMT00001 terminal box in optical-electrical integration scenarios:**

- S5731-H and S5731S-H hybrid optical-electrical switches
- ES5MFMT00001 terminal box
- PDLC hybrid cable pigtail (The same pigtail is used inside and outside the terminal box and is not included in the terminal box.)
- Main cable of the hybrid cable

**Figure 11-27** Connections of the ES5MFMT00001 terminal box (optical-electrical integration scenario)



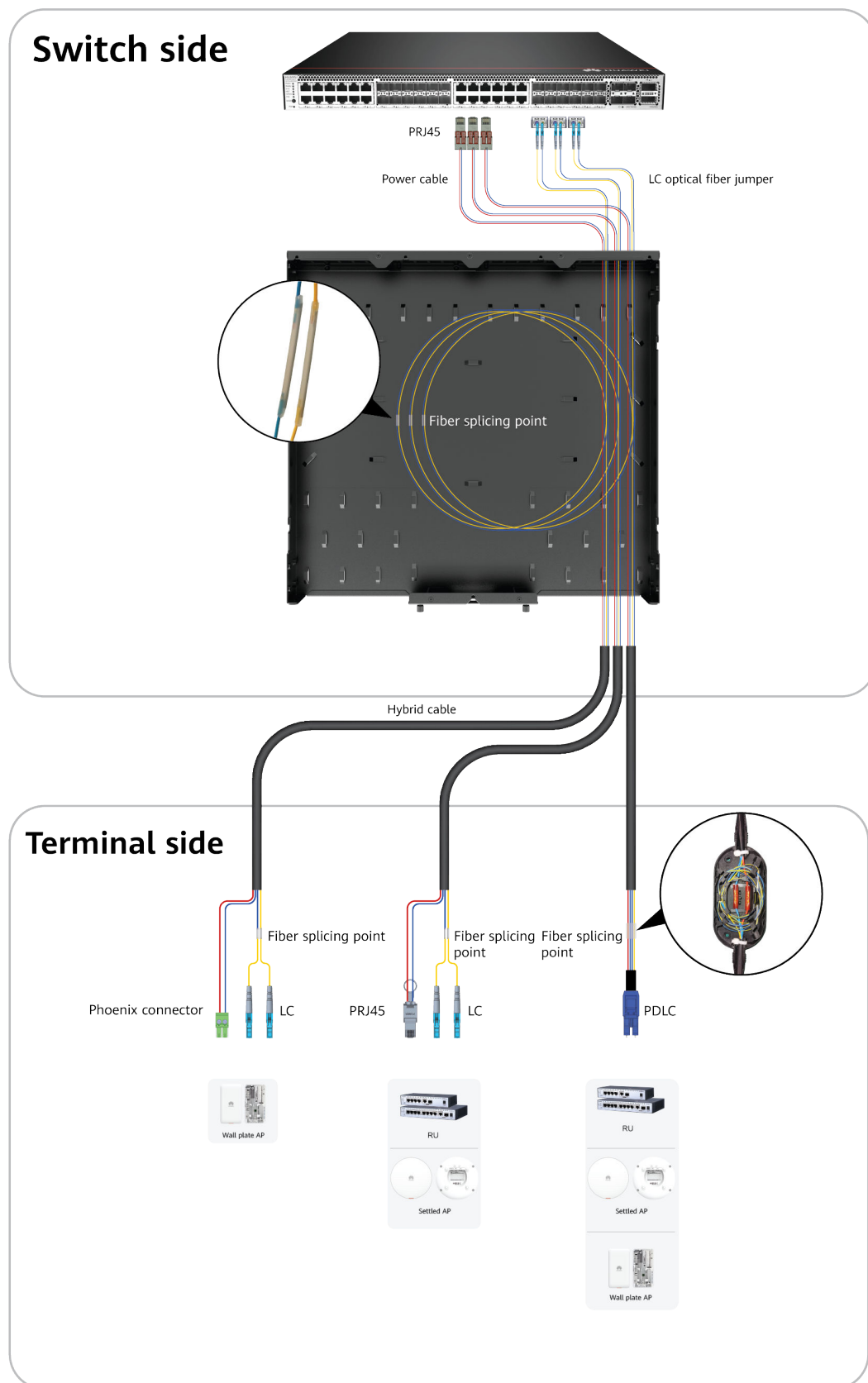
**Connection instructions:**

- Inside the terminal box:
  - Before splicing, route the hybrid cable pigtail through an empty port on the front panel of the terminal box. (The front panel of the terminal box does not contain a PDLC optical-electrical adapter.)
  - After the main cable of the hybrid cable is spliced with the hybrid cable pigtail, coil the spliced cable inside the terminal box.
- Outside the terminal box:
  - Connect the hybrid cable pigtail to the hybrid optical-electrical port on S5731-H and S5731S-H hybrid optical-electrical switches.

**Auxiliary components such as devices and cables related to the ES5MFMT00001 terminal box in optical-electrical separation scenarios:**

- S5732-H hybrid optical-electrical switch
- ES5MFMT00001 terminal box
- LC optical fiber pigtail (The same pigtail is used inside and outside the terminal box and is not included in the terminal box.)
- PRJ45 connector
- Main cable of the hybrid cable

**Figure 11-28** Connections of the ES5MFMT00001 terminal box (optical-electrical separation scenario)



### Connection instructions:

- Inside the terminal box:
  - Before splicing, route the LC optical fiber pigtail through an empty port on the front panel of the terminal box. (The front panel of the terminal box does not contain a DLC fiber adapter.)
  - After the optical fiber of the hybrid cable is spliced with the LC optical fiber pigtail, coil the spliced cable inside the terminal box.
  - Route the power cable of the hybrid cable through an empty port on the front panel of the terminal box.
- Outside the terminal box:
  - Connect the LC optical fiber pigtail to an optical port of the S5732-H hybrid optical-electrical switch and connect the power cable of the hybrid cable to an electrical port of the S5732-H hybrid optical-electrical switch through a PRJ45 connector.

### NOTE

- One terminal box can house a maximum of 24 hybrid cables. If a 48-port hybrid optical-electrical switch is used, two terminal boxes are required.
- Strip the sheath of the hybrid cables inside the terminal box. The stripping start position depends on the installation position of the terminal box in the cabinet. It is recommended that hybrid cables be stripped for a maximum of 1 m to 2.5 m, starting from at least 1 U higher or lower than the terminal box, depending on whether hybrid cables are routed from the top or bottom. When fiber splicing conditions permit, hybrid cables should be stripped as short as possible. If there are a large number of hybrid cables in the cabinet, you are advised to strip the sheath of hybrid cables before routing them into the cabinet.
- A hybrid cable may contain fire-retardant and lubrication materials, such as mica or talcum powder. Dust may be generated when the cable sheath is stripped. Therefore, you are advised to take protective measures, such as wearing gloves and masks.
- For details about the splicing and connection of a hybrid cable, see [\(Video\) Hybrid Cable 1.0 Assembly and Connection Guide](#) and [\(Video\) Hybrid Cable 2.0 Assembly and Connection Guide](#).
- When a terminal box is used, no splicing protection tube is required for the optical fiber splicing part.
- It is recommended that the distance between the switch and a terminal box be at least 1 U.

## Technical Specifications

**Table 11-15** Technical specifications

Item	Description
Model	ES5MFMT00001
Description	24-port hybrid cable terminal box (24 empty ports, no optical-electrical adapter)
Part number	98012288
Dimensions without packaging (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.54 in.)

Item	Description
Height	1 U

### 11.6.3 ES5MFMT00003

#### Overview

ES5MFMT00003 is a single-hybrid-cable terminal box. It is applicable to optical-electrical integration or optical-electrical separation scenarios of RUs.

#### Appearance

**Figure 11-29** Appearance of the ES5MFMT00003 terminal box (without the cover)



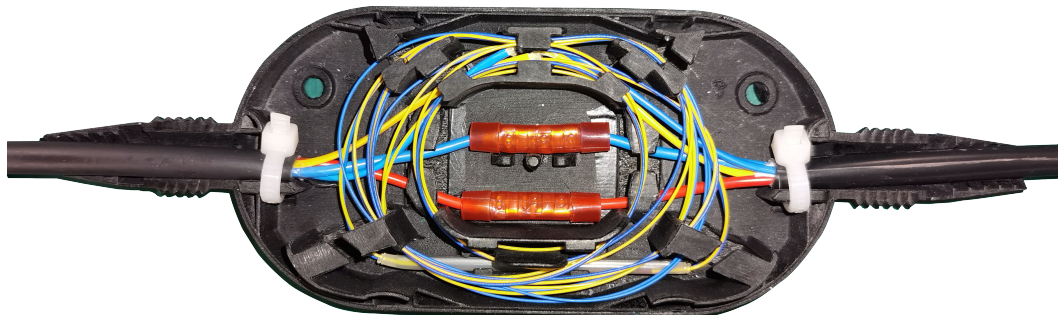
#### Cable Connections

The ES5MFMT00003 terminal box can be used with RUs.

**Auxiliary components such as devices and cables related to the ES5MFMT00003 terminal box in optical-electrical integration scenarios:**

- RU
- ES5MFMT00003 terminal box
- PDLC hybrid cable pigtail
- Main cable of the hybrid cable

**Figure 11-30** Connections of the ES5MFMT00003 terminal box (without a cover, optical-electrical integration scenario)





**Figure 11-31** Connections of the ES5MFMT00003 terminal box (with a cover, optical-electrical integration scenario)



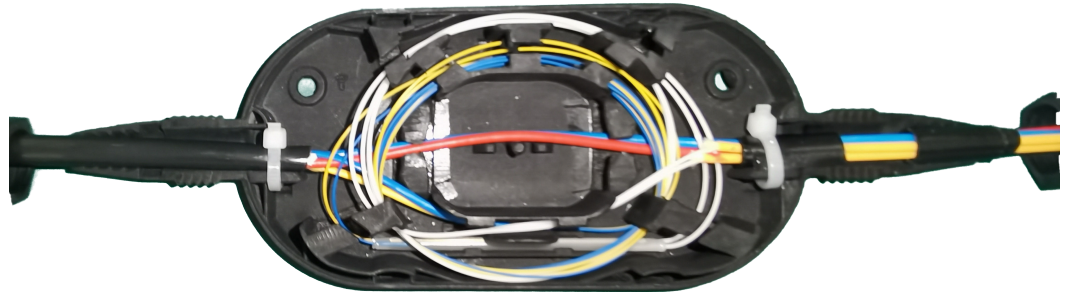
**Connection instructions:**

- Inside the terminal box:
  - Crimp the main cable of a hybrid cable and the hybrid cable pigtail together using bare crimp terminals. Ensure that the colors of the cables at both ends are the same before crimping. After optical fibers are spliced, coil the spliced cable inside the terminal box.
- Outside the terminal box:
  - Connect one end of the terminal box to the main cable of the hybrid cable and the other end to the hybrid cable pigtail.

**Auxiliary components such as devices and cables related to the ES5MFMT00003 terminal box in optical-electrical separation scenarios:**

- RU
- ES5MFMT00003 terminal box
- LC optical fiber pigtail
- PRJ45 connector
- Main cable of the hybrid cable

**Figure 11-32** Connections of the ES5MFMT00003 terminal box (without a cover, optical-electrical separation scenario)



**Figure 11-33** Connections of the ES5MFMT00003 terminal box (with a cover, optical-electrical separation scenario)



#### Connection instructions:

- Inside the terminal box:
  - After the optical fiber of the hybrid cable is spliced with the LC optical fiber pigtail, coil the spliced cable inside the terminal box.
  - The power cable connector inside the terminal box can be removed. After the connector is removed, route the power cable of the hybrid cable out of the terminal box.
- Outside the terminal box:
  - Connect one end of the terminal box to the main cable of the hybrid cable, and the LC optical fiber pigtail at the other end to an optical port of the RU. Connect the power cable of the hybrid cable to an electrical port of the RU through a PRJ45 connector.

#### NOTE

- Before connecting cables, remove the caps from both ends of the terminal box, route the cables into the caps, and then splice or crimp the cables. This prevents the failure to install the caps on the terminal box after cable connection.
- When LC optical fiber pigtails and PRJ45 connectors are used on the RU side, use at least five layers of insulation tape to protect the binding positions of LC optical fiber pigtails and power cables and exit of the terminal box.
- When a terminal box is used, no splicing protection tube is required for the optical fiber splicing part.

## Technical Specifications

**Table 11-16** Technical specifications

Item	Description
Model	ES5MFMT00003
Description	Single-hybrid-cable terminal box (applicable to the remote unit scenario)
Part number	98012290