inspur

Inspur Server NF8260M6
White Paper

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Technical Support

Global Service Hotline:	(+1) 844-860-0011/(+1) 325-880-0011
Address:	No. 1036 Langchao Road, Jinan, China
	Inspur Electronic Information Industry Co., Ltd.
Postal Code:	250101
Email:	serversupport@inspur.com

Preface

Abstract

This white paper describes the NF8260M6 server's appearance, features, performance parameters, and software and hardware compatibility, providing in-depth information of NF8260M6.

Intended Audience

This white paper is intended for:

- Inspur pre-sales engineers

- Pre-sales engineers of channel partners

- Enterprise pre-sales engineers

Symbol Conventions

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

Symbol	Description
⚠ DANGER	A potential for serious injury, or even death if not properly handled
⚠ WARNING	A potential for minor or moderate injury if not properly handled
⚠ CAUTION	A potential loss of data or damage to equipment if not properly handled
ⓘ IMPORTANT	Operations or information that requires special attention to ensure successful installation or configuration
🗐 NOTE	Supplementary description of document information

Revision History

Version	Date	Description of Changes
V1.0	2021/09/30	Initial release
V1.1	2022/12/30	Optimized the document content and format

Table of Contents

1 Product Overview

The Inspur NF8260M6 is a 2U 4-socket rack server powered by the 3rd Gen Intel Xeon Scalable processors (Cooper Lake), targeted at TSPs and CSPs in China, Europe and America. It meets the requirements for high computing performance and large memory capacity, which is ideal for application scenarios with demanding server requirements, such as virtualization, databases, SAP HANA, and AI. It is also a perfect solution for customers with certain demands on density and storage.

Designed for cloud-optimized application scenarios, this server boasts excellent RAS features along with strong computing capacity and scalability. It caters to the low TCO needs of enterprise customers by offering higher computing performance per unit space.

The NF8260M6 features low energy consumption, high scalability, high reliability, easy management, and easy deployment.

Figure 1-1 NF8260M6 – 24 × 2.5-inch Drive Configuration
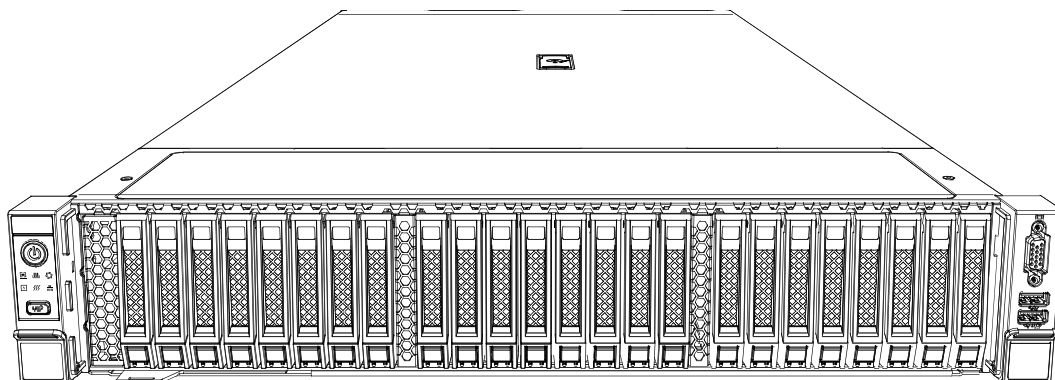
Figure 1-2 NF8260M6 – 25 × 2.5-inch Drive Configuration
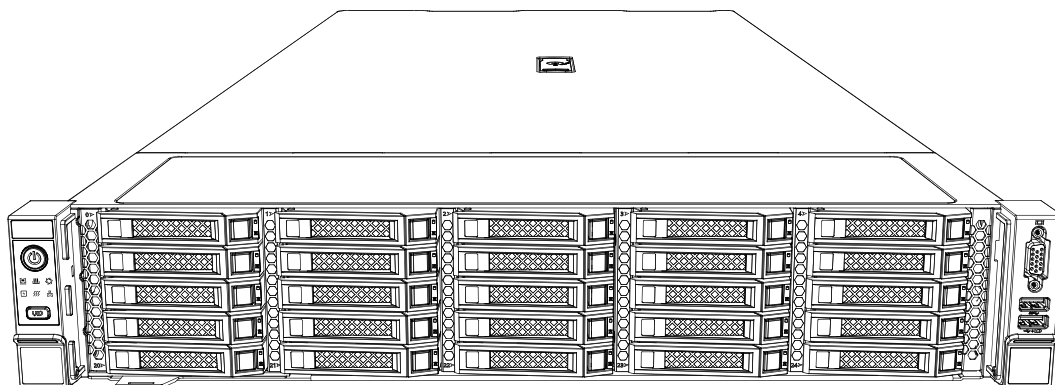
2 Features

2.1 Scalability and Performance

- Features the 3rd Gen Intel Xeon Scalable processors (Cooper Lake), with up to 28 cores per processor, a maximum base frequency of 3.9 GHz, an L3 cache of 38.5 MB, and 6 UPI links at 10.4 GT/s, delivering unrivaled processing performance.

  - Supports up to 4 processors with 112 cores and 224 threads, maximizing the concurrent execution of multi-threaded applications.

  - Optimizes the tiered cache hierarchy and increases the L2 cache capacity, so that memory data can directly enter into and be processed in L2 cache, which greatly improves the memory access performance. Each core can exclusively occupy 1 MB of L2 cache, reducing the usage of L3 cache capacity, and a single processor can share up to 38.5 MB of L3 cache.

  - Supports Intel Turbo Boost Technology 2.0, allowing processor cores to run faster than the marked frequency when the processors are working in the power, temperature, and specification limits of the thermal design power (TDP).

  - Supports Intel Hyper-Threading Technology, allowing up to 2 threads to run on each core to improve the performance of multi-threaded applications.

  - Supports Intel Virtualization Technology that provides hardware assist to the virtualization software, allowing the operating system to better use hardware to handle virtualized workloads.

  - Supports Intel Advanced Vector Extensions 512 (Intel AVX-512), significantly accelerating the workloads that are strongly floating point compute intensive.

  - Supports Intel DL Boost (VNNI) instructions, improving the performance for deep learning applications.

- Supports up to 48 DIMMs and multiple DIMM types.

  - Up to 48 DDR4 ECC DIMMs (3,200 MT/s, RDIMMs or LRDIMMs), providing superior speed, high availability, and a memory capacity up to 6 TB.

  - Up to 24 Intel Optane Persistent Memory 200 Series modules (PMem modules for short), which must be used with DDR4 DIMMs. When used with DDR4 DIMMs, the total memory capacity supported is up to 18 TB

(calculated based on a maximum of 256 GB capacity per DDR4 DIMM and a maximum of 512 GB capacity per PMem module).

- Flexible drive configurations, providing elastic and scalable storage solutions to meet different capacity and upgrade requirements.

- Supports the use of all SSDs that provides higher I/O performance than the use of all HDDs or a combination of HDDs and SSDs.

- 12 Gbps Serial Attached SCSI (SAS), doubling the data transfer rate of internal storage of 6 Gbps SAS solution and maximizing the performance of storage I/O-intensive applications.

- With Intel integrated I/O technology, the processors integrate the PCIe 3.0 controller to shorten I/O latency and enhance overall system performance.

- Up to 13 PCIe 3.0 expansion slots, including 1 dedicated slot for the OCP 3.0 card.

- One 1/10/25/100 GbE OCP 3.0 card, hot-swappable (The RHEL 7.9 OS supports hot-swap; the Windows Server 2019 OS supports hot-swap when it starts up with the OCP 3.0 card installed; the RHEL 8.x OS does not support hot-swap).

2.2 Availability and Serviceability

- Supports hot-swap SAS/SATA/NVMe drives with RAID cache and data protection enabled by the super-capacitor in case of power failures. SAS/SATA drives can be configured to RAID 0/1/1E/10/5/50/6/60 depending on the RAID controller card in use.

- SSDs are much more reliable than traditional HDDs, enabling longer system uptime.

- The UID and status LEDs for fault diagnosis on the front panel, the plug-in LCD module, and the ISBMC Web GUI indicate the status of key components and quickly lead technicians to failed (or failing) components, thus simplifying maintenance, speeding up troubleshooting, and enhancing system availability.

- The ISBMC management port on the rear panel enables local ISBMC O&M, improving O&M efficiency.

- Provides 2 hot-swap PSUs with 1+1 redundancy and 6 hot-swap fan modules with N+1 redundancy, improving overall system availability.

- The onboard ISBMC monitors system parameters in real time and sends alerts in advance, enabling technicians to take appropriate measures to ensure system stable operation and minimize system downtime.

- Online memory diagnosis helps maintenance personnel quickly locate the failed DIMMs through the onboard LEDs, improving maintenance efficiency.

For documentation of the NF8280M6 system, such as product marketing materials, user manuals, product drivers, firmware, and product certifications, visit Inspur website: https://en.inspur.com.

2.3 Manageability and Security

- The onboard ISBMC monitors system operating status and enables remote management.

- Supports the NC-SI feature that allows a network port to serve as a management port and a service port. The NC-SI feature is disabled by default and can be enabled/disabled through the BIOS or ISBMC.

- Integrates the industry-standard UEFI, improving the efficiency of setup, configuration and update, and simplifying the error handling process.

- Supports Intel Platform Firmware Resilience (PFR) technology that helps protect the various platform firmware components.

- Supports Trusted Platform Module (TPM 2.0) and Trusted Cryptography Module (TCM) that provide advanced encryption.

- Supports Intel Trusted Execution Technology that provides enhanced security through hardware-based resistance to malicious software attacks.

- Supports the firmware update mechanism based on digital signatures to prevent unauthorized firmware updates.

- Supports UEFI Secure Boot to protect the system from malicious boot loaders.

- Supports hierarchical password protection in BIOS, ensuring system boot and management security.

- Supports BIOS Secure Flash and BIOS Lock Enable (BLE), reducing attacks from malicious software on the BIOS flash region.

- Supports dual-image mechanism for BMC and BIOS, recovering firmware upon detection of firmware damage.

- Supports BMC Secure Boot, protecting BMC from malicious tampering.

- Supports flexible BMC access control policies, improving BMC management security.

- Supports chassis intrusion detection, enhancing physical security.

- Supports an optional bezel locking kit, preventing unauthorized users from removing or installing drives, and thus ensuring the security of local data.

The service port with NC-SI enabled supports:

- Any network port on the OCP NIC card or other PCIe NICs that support the NC-SI feature can be configured as the service port with NC-SI enabled.
- Enabling, disabling, and setting of the VLAN ID, which is 0 and disabled by default.
- Both IPv4 and IPv6 addresses, of which the IP address, subnet mask, and default gateway can be configured, as well as the prefix length of IPv6 address.

2.4 Energy Efficiency

- Equipped with 80 Plus Platinum/Titanium power supplies with power efficiency up to 96% at a load of 50%.

- Supports AC/DC power supplies with 1+1 redundancy.

- Features the high-efficiency single-board voltage regulator down (VRD) solution, reducing DC-DC conversion loss.

- Supports Proportional-Integral-Derivative (PID) intelligent fan speed control and intelligent CPU frequency scaling, conserving energy.

- Offers a fully-optimized system cooling design with energy-efficient cooling fans, lowering energy consumption of system cooling.

- Offers power capping and power control measures.

- Supports staggered spin-up of drives, reducing power consumption of server startup.

- Supports Intel Intelligent Power Capability (IIPC) to optimize energy usage in the processor cores by turning computing functions on only when needed.

- Supports low-voltage 3rd Gen Intel Xeon Scalable processors (Cooper Lake), consuming less energy and meeting the demands of data centers and telecommunications environments constrained by power and thermal limitations.

3 System Parts Breakdown

Figure 3-1 NF8260M6 Exploded View (Demonstrated with 24 × 2.5-inch Drive Configuration)
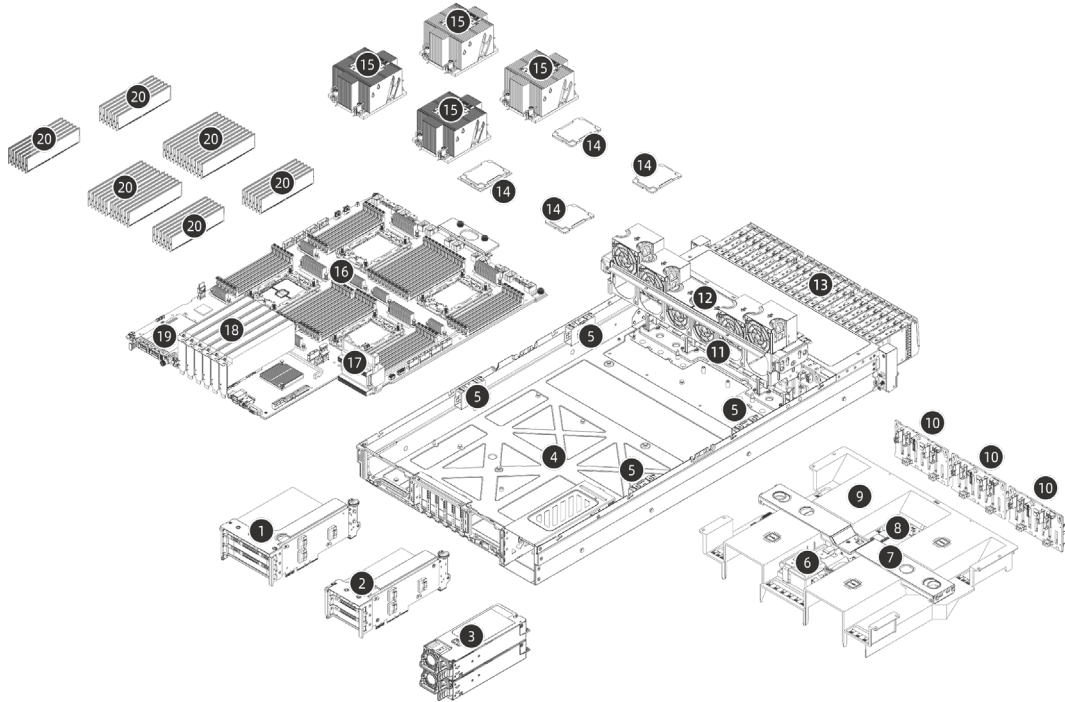
Item	Feature	Item	Feature
1	PCIe Riser Module 0	2	PCIe Riser Module 1
3	PSUs	4	Chassis
5	Cable Guides	6	Super-Capacitor Holder
7	Reinforcement Crossbar with Intrusion Switch	8	Internal M.2 SSDs
9	Air Duct	10	Front Drive Backplanes
11	Fan Cage	12	Fans
13	Front Drives	14	CPUs
15	CPU Heatsinks	16	Motherboard
17	Power Backplane	18	PCIe Expansion Cards
19	OCP 3.0 Card	20	DIMMs

4 System Logical Diagram

Figure 4-1 System Logical Diagram
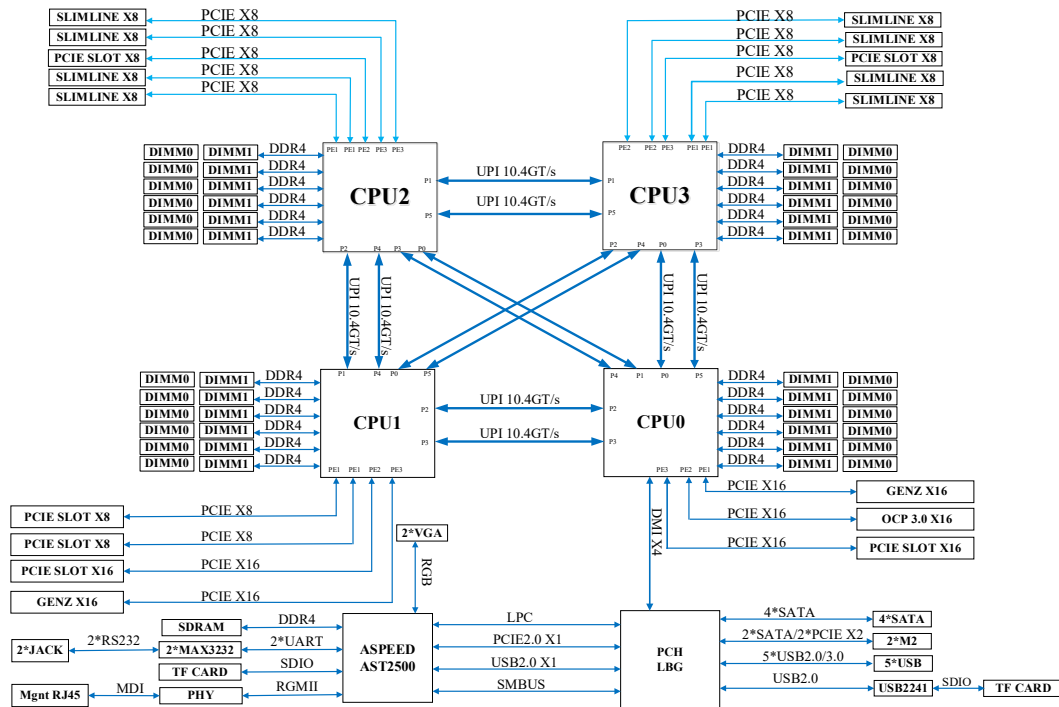
- Two or four 3rd Gen Intel Xeon Scalable processors (Cooper Lake).

- Up to 48 DIMMs.

- 6 UPI links at up to 10.4 GT/s.

- Up to 13 PCIe 3.0 expansion slots, with CPU0 supporting 1 OCP 3.0 card.

- The mezz RAID card is connected to CPU1 via the PCIe bus, and is connected to the drive backplane via the SAS signal cable. Multiple local storage configurations are supported through different drive backplanes.

- The motherboard integrates the LBG-R Platform Controller Hub (PCH) to support 5 USB 3.0 ports, 4 SATA 3.0 connectors, 2 SATA/PCIe x2 M.2 connectors, and 1 TF card.

- The motherboard integrates an AST2500 management chip which supports a VGA port, a management network port, a serial port, and a TF card slot.

5 Hardware Description

5.1 Front Panel

5.1.1 Front View

- NF8260M6 (24 × 2.5-inch Drive Configuration)

Figure 5-1 Front View
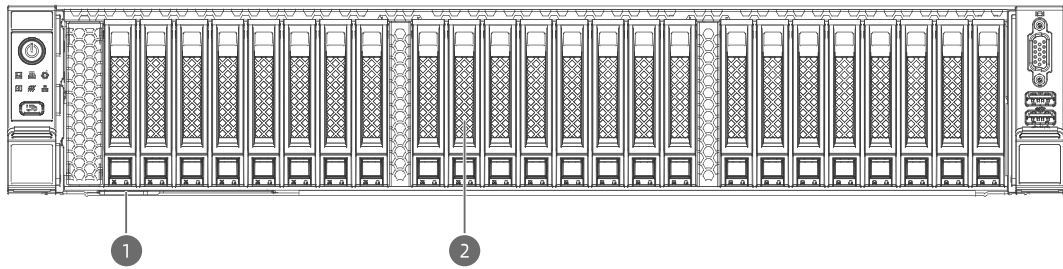
Item	Feature	Item	Feature
1	Serial Label Pull Tag (with an SN label and drive numbers)	2	Drive Bay × 24

- NF8260M6 (25 × 2.5-inch Drive Configuration)

Figure 5-2 Front View
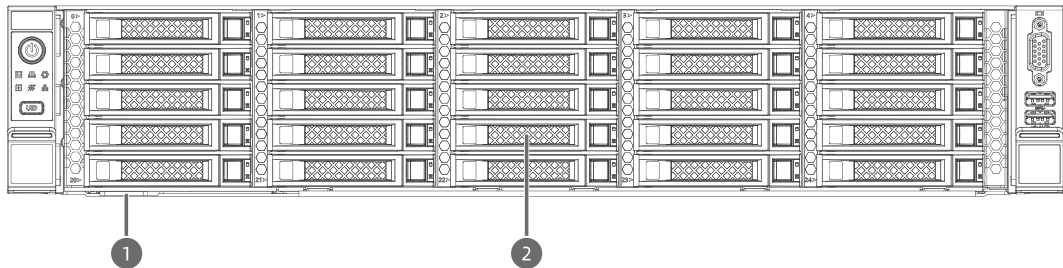
Item	Feature	Item	Feature
1	Serial Label Pull Tag (with an SN label and drive numbers)	2	Drive Bay × 25

5.1.2 LEDs & Buttons

- NF8260M6 (24 × 2.5-inch Drive Configuration)

Figure 5-3 Front Panel LEDs and Buttons
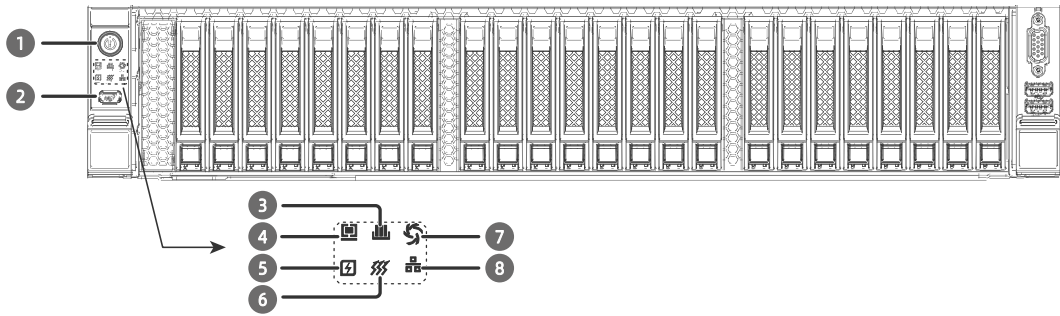
Item	Feature	Item	Feature
1	Power Button and LED	2	UID/BMC RST Button and LED
3	Memory Status LED	4	System Status LED
5	Power Status LED	6	System Overheat LED
7	Fan Status LED	8	Network Status LED

● NF8260M6 (25 × 2.5-inch Drive Configuration)

Figure 5-4 Front Panel LEDs and Buttons
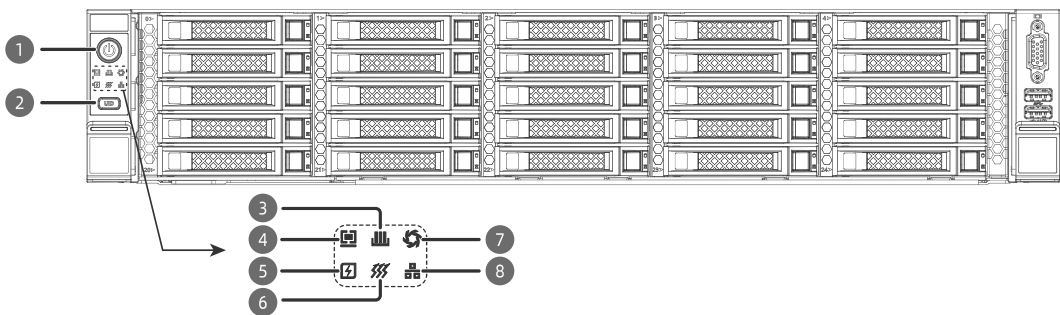
Item	Feature	Item	Feature
1	Power Button and LED	2	UID/BMC RST Button and LED
3	Memory Status LED	4	System Status LED
5	Power Status LED	6	System Overheat LED
7	Fan Status LED	8	Network Status LED

1. LED and Button Description

Table 5-1 Front Panel LED and Button Description

Icon	LED & Button	Description
⏻	Power Button and LED	Power LED: • Off = No power • Solid green = Power-on state • Solid orange = Standby state Power button: Long press 6 seconds to force a shutdown from the power-on state. Notes: • Follow the prompt under the OS to shut it down. • Short press the power button to power on the system in standby state.
UID	UID/BMC RST Button and LED	The UID LED is used to identify the device to be operated. • Off = System unit not identified • Solid blue = System unit identified • Flashing blue = System unit being operated remotely Notes: • The UID LED turns on when activated by the UID button or via ISBMC remotely. • Long press the UID button for over 6 seconds to reset the BMC.
ᆈ	Memory Status LED	• Off = Normal • Flashing red (1 Hz) = A non-critical warning occurs • Solid red = A critical warning occurs
▣	System Status LED	• Off = Normal • Flashing red (1 Hz) = A non-critical warning occurs • Solid red = A critical warning occurs
⚡	Power Status LED	• Off = Normal

Icon	LED & Button	Description
		• Flashing red (1 Hz) = A non-critical warning occurs • Solid red = A critical warning occurs
〻	System Overheat LED	• Off = Normal • Flashing red (1 Hz) = A non-critical warning occurs • Solid red = A critical warning occurs
⚙	Fan Status LED	• Off = Normal • Flashing red (1 Hz) = A non-critical warning occurs • Solid red = A critical warning occurs
⊟	Network Status LED	• Off = No network connection or abnormal network • Flashing green = Data being transmitted

5.1.3 Ports

● NF8260M6 (24 × 2.5-inch Drive Configuration)

Figure 5-5 Front Panel Ports
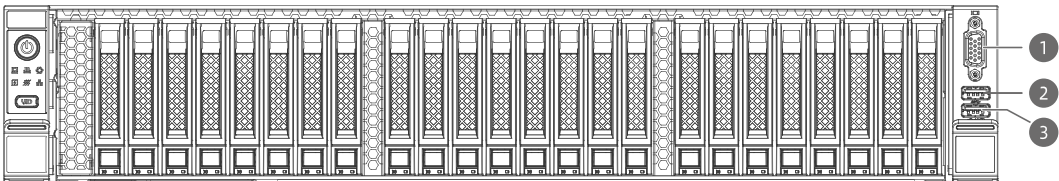
Item	Feature	Item	Feature
1	VGA Port	2	USB 3.0 Port
3	USB 2.0/LCD Port		

● NF8260M6 (25 × 2.5-inch Drive Configuration)

Figure 5-6 Front Panel Ports
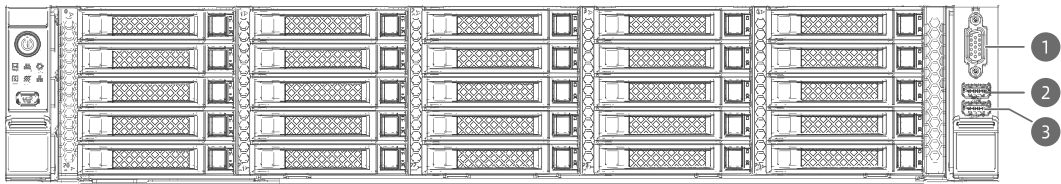
Item	Feature	Item	Feature
1	VGA Port	2	USB 3.0 Port
3	USB 2.0/LCD Port		

1. Port Description

Table 5-2 Front Panel Port Description

Feature	Type	Quantity	Description
VGA Port	DB15	1	Enables you to connect a display terminal, for example, a monitor or KVM, to the system.
USB 3.0 Port	USB 3.0	1	Enables you to connect a USB 3.0 device to the system. Notes: • The maximum current supported by the USB port is 0.9 A. • Make sure that the USB device is in good condition or it may cause the server to work abnormally.
USB 2.0/LCD Port	USB 2.0	1	• Enables you to connect a USB 2.0 device to the system. Notes: • The maximum current supported by the USB port is 0.9 A. • Make sure that the USB device is in good condition or it may cause the server to work abnormally. • Enables you to connect an Inspur exclusive LCD module to the system.

5.2 Rear Panel

5.2.1 Rear View

Figure 5-7 Rear View 1
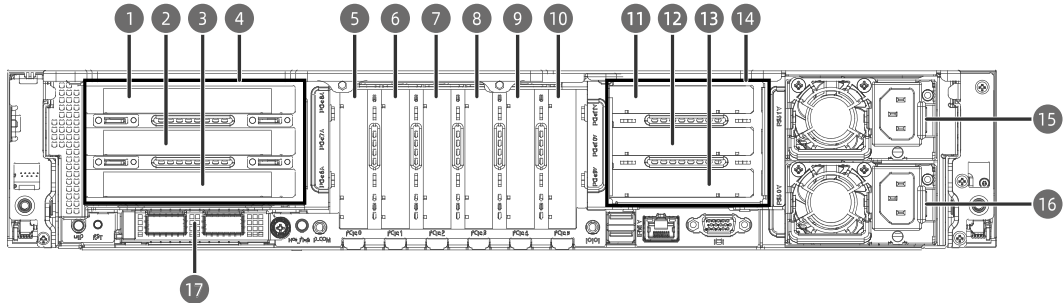
Item	Feature	Item	Feature
1	PCIe Slot 8	2	PCIe Slot 7
3	PCIe Slot 6	4	PCIe Riser Module 0
5	PCIe Slot 0	6	PCIe Slot 1
7	PCIe Slot 2	8	PCIe Slot 3
9	PCIe Slot 4	10	PCIe Slot 5
11	PCIe Slot 11	12	PCIe Slot 10
13	PCIe Slot 9	14	PCIe Riser Module 1
15	PSU1	16	PSU0
17	OCP 3.0 Slot		

Figure 5-8 Rear View 2
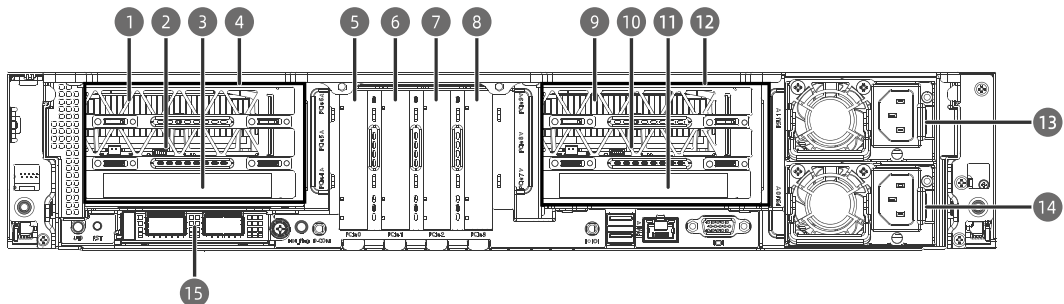
Item	Feature	Item	Feature
1	PCIe Slot 8	2	PCIe Slot 7
3	PCIe Slot 6	4	PCIe Riser Module 0
5	PCIe Slot 0	6	PCIe Slot 1
7	PCIe Slot 2	8	PCIe Slot 3

Item	Feature	Item	Feature
9	PCIe Slot 11	10	PCIe Slot 10
11	PCIe Slot 9	12	PCIe Riser Module 1
13	PSU1	14	PSU0
15	OCP 3.0 Slot		

NOTE

- PCIe riser module 0 and PCIe riser module 1 are optional.
- The figures are for reference only. The actual configuration may differ.

5.2.2 LEDs & Buttons

Figure 5-9 Rear Panel LEDs and Buttons 1
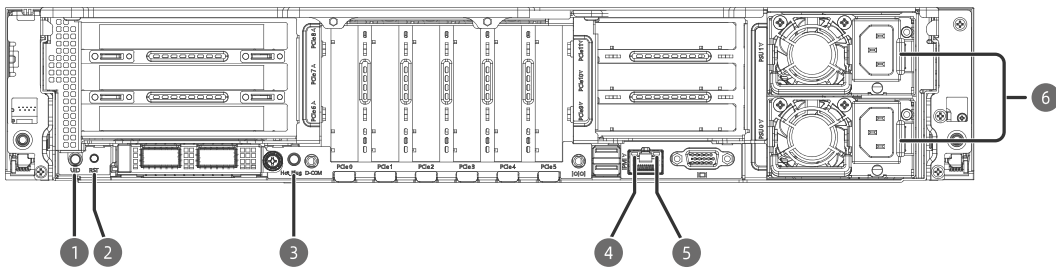
Item	Feature	Item	Feature
1	UID/BMC RST Button and LED	2	System Reset Button
3	OCP Hot Plug Button and LED	4	Management Network Port Link Speed LED
5	Management Network Port Link Activity LED	6	PSU LEDs

Figure 5-10 Rear Panel LEDs and Buttons 2
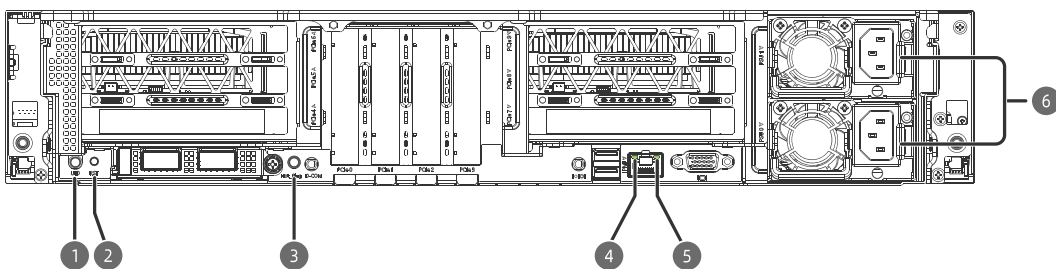
Item	Feature	Item	Feature
1	UID/BMC RST Button and LED	2	System Reset Button
3	OCP Hot Plug Button and LED	4	Management Network Port Link Speed LED
5	Management Network Port Link Activity LED	6	PSU LEDs

1. LED and Button Description

Table 5-3 Rear Panel LED and Button Description

LED & Button	Description
UID/BMC RST Button and LED	The UID LED is used to identify the device to be operated. • Off = System unit not identified • Solid blue = System unit identified • Flashing blue = System unit being operated remotely Notes: • The UID LED turns on when activated by the UID button or via ISBMC remotely. • Long press the UID button for over 6 seconds to reset the BMC.
System Reset Button	After pressing the button, the server will automatically power off and restart the power-on sequence.
OCP Hot Plug Button and LED	• The button is used to support the hot-swap function of the OCP 3.0 card. • LED: - Solid on = OCP 3.0 card powered on - Flashing = OCP 3.0 card in power-on process - Off = OCP 3.0 card not powered on
Management Network Port Link Speed LED	• Off = No network connection • Solid green = Network connected with link speed at 1,000 Mbps • Solid orange = Network connected with link speed at 10/100 Mbps

LED & Button	Description
Management Network Port Link Activity LED	• Off = No network connection • Solid green = Network connected without data being transmitted • Flashing green = Network connected with data being transmitted
PSU LED	• Off = No AC power to PSU • Flashing green (1 Hz) = PSU operating in standby state with normal AC input • Flashing green (2 Hz) = PSU firmware updating • Flashing green (off for 1 second, on for 2 seconds) = PSU in cold redundant state • Solid green = Normal input and output • Flashing amber (1 Hz) = PSU warning event where the PSU continues to operate (possible causes: PSU overtemperature, PSU output overcurrent, excessively high or low fan speed) • Solid amber = PSU critical event causing a shutdown (possible causes: PSU overtemperature protection, PSU output overcurrent or short circuit, output overvoltage, short circuit protection, component (not all components) failure)

5.2.3 Ports

1. Port Locations

Figure 5-11 Rear Panel Ports 1
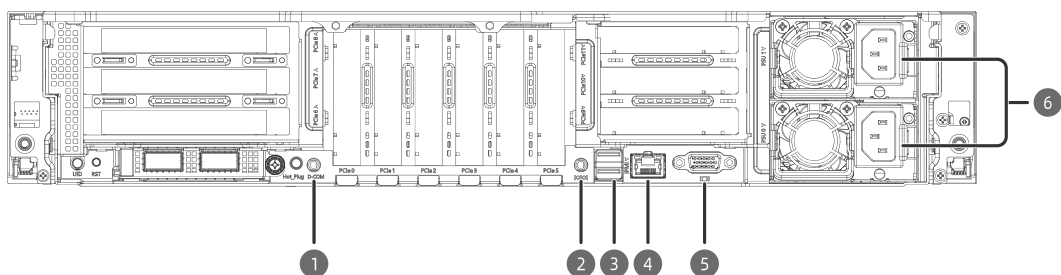
Item	Feature	Item	Feature
1	BMC Debug Serial Port	2	System Serial Port
3	USB 3.0 Ports	4	Management Network Port
5	VGA Port	6	PSU Sockets

Figure 5-12 Rear Panel Ports 2
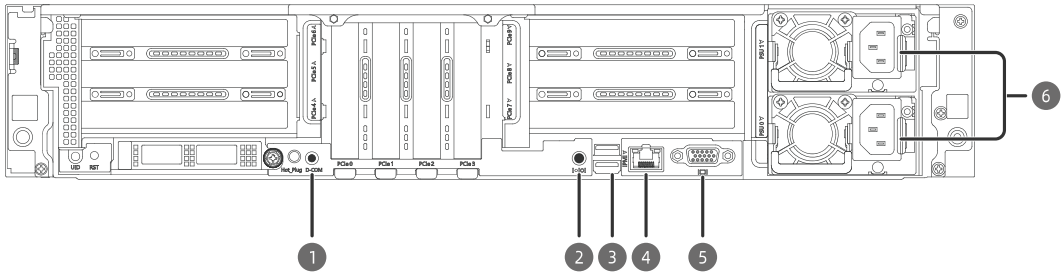
Item	Feature	Item	Feature
1	BMC Debug Serial Port	2	System Serial Port
3	USB 3.0 Ports	4	Management Network Port
5	VGA Port	6	PSU Sockets

2. Port Description

Table 5-4 Rear Panel Port Description

Feature	Type	Quantity	Description
BMC Debug Serial Port	3.5 mm audio jack	1	Enables you to capture BMC logs and use the BMC debugging function. Note: The serial port is a 3.5 mm audio jack with a default baud rate of 115,200 bit/s.
System Serial Port	3.5 mm audio jack	1	Enables you to print system logs. Note: The serial port is a 3.5 mm audio jack with a default baud rate of 115,200 bit/s.
USB Port	USB 3.0	2	Enables you to connect a USB 3.0 device to the system. Notes: • The maximum current supported by the USB port is 0.9 A. • Make sure that the USB device is in good condition or it may cause the server to work abnormally.

Feature	Type	Quantity	Description
Management Network Port	RJ45	1	ISBMC management network port, used to manage the server. Note: It is a Gigabit Ethernet port that supports 100 Mbps and 1000 Mbps auto-negotiation.
VGA Port	DB15	1	Enables you to connect a display terminal, for example, a monitor or KVM, to the system.
PSU Socket	N/A	2	Connected through a power cord. Users can select the PSUs as needed. Note: Make sure that the total rated power of the PSUs is greater than that of the server.

5.3 Processors

- Supports 2 or 4 processors.

- If 2 processors are used, install them in sockets CPU0 and CPU1.

- The processors used in a server must be of the same model.

For specific system processor options, consult your local Inspur sales representative or refer to 7.2 Hardware Compatibility.

Figure 5-13 Processor Locations
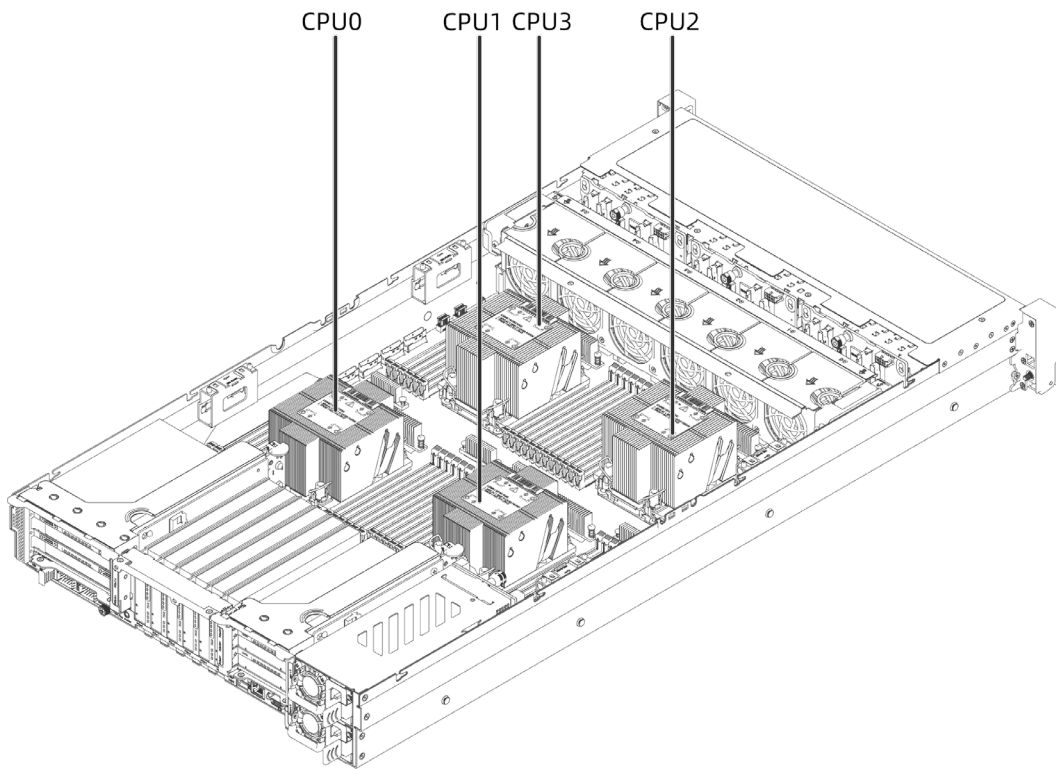
5.4 Memory

5.4.1 DDR4 DIMMs

1. Identification

To determine DIMM characteristics, refer to the label attached to the DIMM and the following figure and table.

Figure 5-14 DIMM Identification
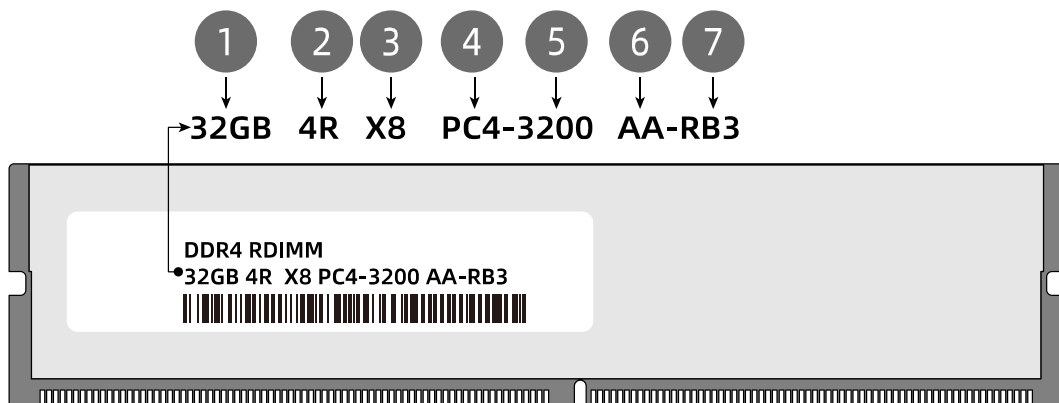
Item	Description	Example
1	Capacity	• 16 GB • 32 GB • 64 GB • 128 GB • 256 GB
2	Rank(s)	• 1R = Single rank • 2R = Dual rank • 2S2R = Two ranks of two high stacked 3DS DRAM • 4DR = Four ranks of dual die packaged DRAM • 4R = Quad rank
3	Data width of DRAM	• x4 = 4 bits • x8 = 8 bits
4	DIMM slot type	PC4 = DDR4
5	Maximum memory speed	• 2,933 MT/s • 3,200 MT/s
6	CAS latency	SDP-chip-based • V = CAS-19-19-19 • Y = CAS-21-21-21 • AA = CAS-22-22-22 3DS-chip-based • V = CAS-22-19-19 • Y = CAS-24-21-21 • AA = CAS-26-22-22
7	DIMM type	• R = RDIMM • L = LRDIMM

2. Memory Subsystem Architecture

The NF8260M6 supports 48 DIMM slots and 6 channels per CPU.

Within a channel, populate the DIMM slot with its silk screen ending with D0 first and second the DIMM slot with its silk screen ending with D1. For instance, within CPU0 Channel 0, populate CPU0_C0D0 first and second CPU0_C0D1.

Table 5-5 DIMM Slot List

CPU	Channel ID	Silk Screen
CPU0	Channel 0	CPU0_C0D0
		CPU0_C0D1
	Channel 1	CPU0_C1D0
		CPU0_C1D1
	Channel 2	CPU0_C2D0
		CPU0_C2D1
	Channel 3	CPU0_C3D0
		CPU0_C3D1
	Channel 4	CPU0_C4D0
		CPU0_C4D1
	Channel 5	CPU0_C5D0
		CPU0_C5D1
CPU1	Channel 0	CPU1_C0D0
		CPU1_C0D1
	Channel 1	CPU1_C1D0
		CPU1_C1D1
	Channel 2	CPU1_C2D0
		CPU1_C2D1
	Channel 3	CPU1_C3D0
		CPU1_C3D1
	Channel 4	CPU1_C4D0
		CPU1_C4D1
	Channel 5	CPU1_C5D0
		CPU1_C5D1
CPU2	Channel 0	CPU2_C0D0
		CPU2_C0D1
	Channel 1	CPU2_C1D0
		CPU2_C1D1
	Channel 2	CPU2_C2D0
		CPU2_C2D1
	Channel 3	CPU2_C3D0
		CPU2_C3D1
	Channel 4	CPU2_C4D0
		CPU2_C4D1

CPU	Channel ID	Silk Screen
	Channel 5	CPU2_C5D0
		CPU2_C5D1
CPU3	Channel 0	CPU3_C0D0
		CPU3_C0D1
	Channel 1	CPU3_C1D0
		CPU3_C1D1
	Channel 2	CPU3_C2D0
		CPU3_C2D1
	Channel 3	CPU3_C3D0
		CPU3_C3D1
	Channel 4	CPU3_C4D0
		CPU3_C4D1
	Channel 5	CPU3_C5D0
		CPU3_C5D1

3. Compatibility

Refer to the following rules to configure the DDR4 DIMMs.

(i)IMPORTANT

- A server must use DDR4 DIMMs with the same part number (P/N code). All DDR4 DIMMs operate at the same speed, which is the lowest of:
  - Memory speed supported by a specific CPU.
  - Maximum operating speed of a memory module.
- Mixing DDR4 DIMM types (RDIMM, LRDIMM) or mixing DDR4 DIMM specifications (capacity, bit width, rank, height, etc.) is not supported.
- For specific system memory options, consult your local Inspur sales representative or refer to 7.2 Hardware Compatibility.

- Supports being used with the 3rd Gen Intel Xeon Scalable processors (Cooper Lake). The maximum memory capacity supported varies with the CPU model.

  - H-series CPUs support a memory capacity of 1.12 TB per socket.

  - HL-series CPUs support a memory capacity of 4.5 TB per socket.

- Total memory capacity is the sum of the capacities of all DDR4 DIMMs.

- The total memory capacity cannot exceed the maximum memory capacity supported by the CPUs.

- The maximum number of DIMMs supported varies with the CPU type, DIMM type and rank quantity.

NOTE

Maximum number of DIMMs supported per channel ≤ Maximum number of ranks supported per channel/Number of ranks per DIMM.

Table 5-6 DDR4 DIMM Specifications

Item	Value			
Capacity per DDR4 DIMM (GB)	16	32	64	128
Type	RDIMM	RDIMM	RDIMM	LRDIMM
Rated speed (MT/s)	3,200	3,200	3,200	3,200
Operating voltage (V)	1.2	1.2	1.2	1.2
Maximum number of DDR4 DIMMs supported in a server[a]	48	48	48	48
Maximum capacity of DDR4 DIMMs supported in a server (GB)[b]	768	1,536	3,072	6,144
Actual speed (MT/s)	1DPC[c]	3,200	3,200	3,200	3,200
	2DPC	3,200	3,200	3,200	3,200

a: The maximum number of DDR4 DIMMs supported is based on the 4-processor configuration. The number is halved for the 2-processor configuration.
b: It indicates the maximum DDR4 memory capacity supported when all DIMM slots are populated. The maximum DDR4 capacity varies with the CPU type.
c: DIMM Per Channel (DPC) is the number of DIMMs per memory channel.
The above information is for reference only, consult your local Inspur sales representative for details.

4. Population Rules

NOTE

This section describes the DIMM population rules when only DDR4 DIMMs are populated in a server. If mixing DDR4 DIMMs and PMems is required, refer to 4 Population Rules in 5.4.2.

General population rules for DDR4 DIMMs:

- Install DIMMs only when the corresponding processor is installed.

- Mixing LRDIMMs and RDIMMs is not supported.

- Install dummies in the empty DIMM slots.

Population rules for DDR4 DIMMs in specific modes:

- Memory sparing

  - Follow the general population rules.

  - Each channel must have a valid online spare configuration.

  - Each channel can have a different online spare configuration.

  - Each channel with a DIMM installed must have a spare rank.

- Memory mirroring

  - Follow the general population rules.

  - Each processor supports 2 integrated memory controllers (IMCs). Each IMC has 2 channels to be populated with DIMMs which must be identical in size and organization.

  - In a multi-processor configuration, each processor must have a valid memory mirroring configuration.

5. DIMM Slot Layout

Up to 48 DDR4 DIMMs can be installed in a server. Balance the total memory capacity between the installed processors for optimal memory performance. DIMM configuration must be compliant with the DIMM population rules.

Figure 5-15 DIMM Slot Layout

Table 5-7 DDR4 DIMM Population Rules (2-Processor Configuration)

DIMM Quantity (√: Recommended ○: Not Recommended)

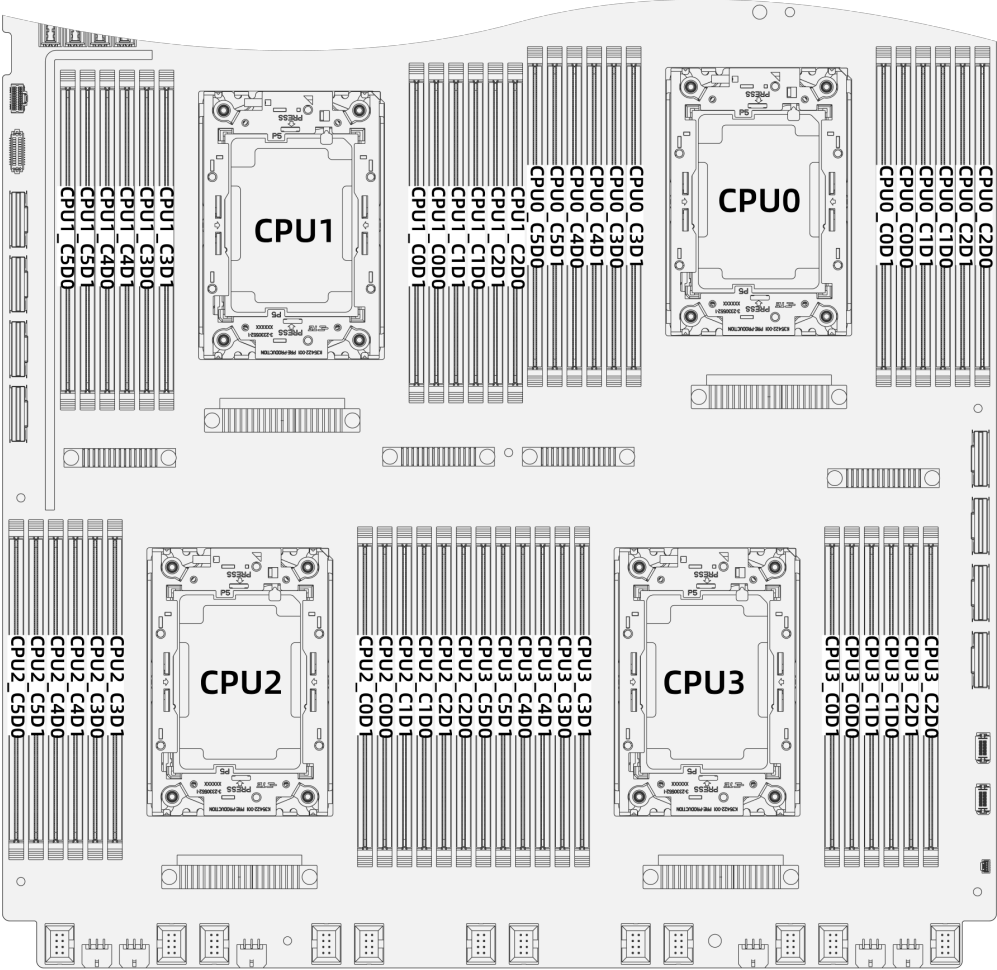| Processor	Channel ID	Memory Slot	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
			○	√		○	○	○	○	√	○	○	○	√	○	○	○	○	○	○	○	○	○	○	○	√
CPU0	Channel0	CPU0_C0D0	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		CPU0_C0D1													●	●	●	●	●	●	●	●	●	●	●	●
	Channel1	CPU0_C1D0					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		CPU0_C1D1																	●	●	●	●	●	●	●	●
	Channel2	CPU0_C2D0									●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		CPU0_C2D1																					●	●	●	●
	Channel3	CPU0_C3D0			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		CPU0_C3D1															●	●	●	●	●	●	●	●	●	●
	Channel4	CPU0_C4D0							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		CPU0_C4D1																			●	●	●	●	●	●
	Channel5	CPU0_C5D0											●	●	●	●	●	●	●	●	●	●	●	●	●	●
		CPU0_C5D1																							●	●
CPU1	Channel0	CPU1_C0D0		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		CPU1_C0D1														●	●	●	●	●	●	●	●	●	●	●
	Channel1	CPU1_C1D0						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		CPU1_C1D1																		●	●	●	●	●	●	●
	Channel2	CPU1_C2D0										●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		CPU1_C2D1																						●	●	●
	Channel3	CPU1_C3D0				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		CPU1_C3D1																●	●	●	●	●	●	●	●	●
	Channel4	CPU1_C4D0								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		CPU1_C4D1																				●	●	●	●	●
	Channel5	CPU1_C5D0												●	●	●	●	●	●	●	●	●	●	●	●	●
		CPU1_C5D1																								●

Table 5-8 DDR4 DIMM Population Rules (4-Processor Configuration)

Processor	Channel ID	DIMM Slot	DIMM Quantity (√: Recommended o: Not Recommended)																																													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
			o	o	o	√	o	o	o	o	o	o	o	o	o	o	o	√	o	o	o	o	o	o	o	√	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	√
CPU0	Channel0	CPU0_C0D0																																																	
		CPU0_C0D1																																																	
	Channel1	CPU0_C1D0																																																	
		CPU0_C1D1																																																	
	Channel2	CPU0_C2D0																																																	
		CPU0_C2D1																																																	
	Channel3	CPU0_C3D0																																																	
		CPU0_C3D1																																																	
	Channel4	CPU0_C4D0																																																	
		CPU0_C4D1																																																	
	Channel5	CPU0_C5D0																																																	
		CPU0_C5D1																																																	
CPU1	Channel0	CPU1_C0D0																																																	
		CPU1_C0D1																																																	
	Channel1	CPU1_C1D0																																																	
		CPU1_C1D1																																																	
	Channel2	CPU1_C2D0																																																	
		CPU1_C2D1																																																	
	Channel3	CPU1_C3D0																																																	
		CPU1_C3D1																																																	
	Channel4	CPU1_C4D0																																																	
		CPU1_C4D1																																																	
	Channel5	CPU1_C5D0																																																	
		CPU1_C5D1																																																	
CPU2	Channel0	CPU2_C0D0																																																	
		CPU2_C0D1																																																	
	Channel1	CPU2_C1D0																																																	
		CPU2_C1D1																																																	
	Channel2	CPU2_C2D0																																																	
		CPU2_C2D1																																																	
	Channel3	CPU2_C3D0																																																	
		CPU2_C3D1																																																	
	Channel4	CPU2_C4D0																																																	
		CPU2_C4D1																																																	
	Channel5	CPU2_C5D0																																																	
		CPU2_C5D1																																																	
CPU3	Channel0	CPU3_C0D0																																																	
		CPU3_C0D1																																																	
	Channel1	CPU3_C1D0																																																	
		CPU3_C1D1																																																	
	Channel2	CPU3_C2D0																																																	
		CPU3_C2D1																																																	
	Channel3	CPU3_C3D0																																																	
		CPU3_C3D1																																																	
	Channel4	CPU3_C4D0																																																	
		CPU3_C4D1																																																	
	Channel5	CPU3_C5D0																																																	
		CPU3_C5D1																																																	

5.4.2 PMems

1. Identification

Figure 5-16 PMem Identification
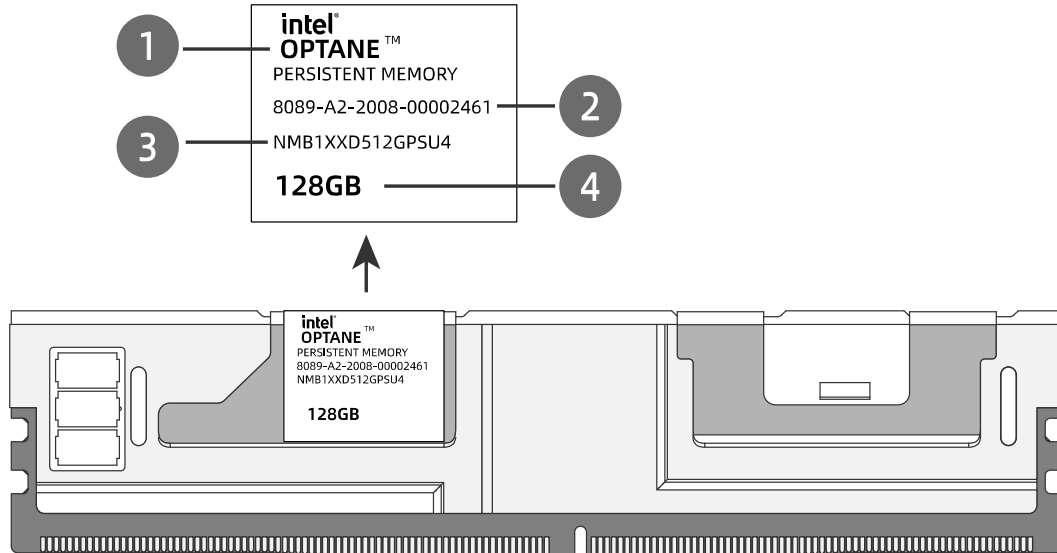
Item	Description	Example
1	Component name	Intel Optane Persistent Memory
2	Serial number	8089-A2-2008-00002461
3	Model	NMB1XXD512GPSU4
4	Capacity	• 128 GB • 256 GB • 512 GB

2. Memory Subsystem Architecture

The NF8260M6 supports 48 DIMM slots and 6 channels per CPU. Only 1 PMem can be populated in each channel.

PMems must be used with DDR4 DIMMs.

Table 5-9 DIMM Slot List

CPU	Channel ID	Silk Screen
CPU0	Channel 0	CPU0_C0D0
		CPU0_C0D1
	Channel 1	CPU0_C1D0
		CPU0_C1D1

CPU	Channel ID	Silk Screen
	Channel 2	CPU0_C2D0
		CPU0_C2D1
	Channel 3	CPU0_C3D0
		CPU0_C3D1
	Channel 4	CPU0_C4D0
		CPU0_C4D1
	Channel 5	CPU0_C5D0
		CPU0_C5D1
CPU1	Channel 0	CPU1_C0D0
		CPU1_C0D1
	Channel 1	CPU1_C1D0
		CPU1_C1D1
	Channel 2	CPU1_C2D0
		CPU1_C2D1
	Channel 3	CPU1_C3D0
		CPU1_C3D1
	Channel 4	CPU1_C4D0
		CPU1_C4D1
	Channel 5	CPU1_C5D0
		CPU1_C5D1
CPU2	Channel 0	CPU2_C0D0
		CPU2_C0D1
	Channel 1	CPU2_C1D0
		CPU2_C1D1
	Channel 2	CPU2_C2D0
		CPU2_C2D1
	Channel 3	CPU2_C3D0
		CPU2_C3D1
	Channel 4	CPU2_C4D0
		CPU2_C4D1
	Channel 5	CPU2_C5D0
		CPU2_C5D1
CPU3	Channel 0	CPU3_C0D0
		CPU3_C0D1
	Channel 1	CPU3_C1D0
		CPU3_C1D1
	Channel 2	CPU3_C2D0
		CPU3_C2D1
	Channel 3	CPU3_C3D0
		CPU3_C3D1
	Channel 4	CPU3_C4D0
		CPU3_C4D1

CPU	Channel ID	Silk Screen
	Channel 5	CPU3_C5D0
		CPU3_C5D1

3. Compatibility

Refer to the following rules to configure the PMems.

- PMems must be used with DDR4 DIMMs.

- PMems must be used with the 3rd Gen Intel Xeon Scalable processors (Cooper Lake). The maximum memory capacity supported varies with the CPU model.

  - H-series CPUs support a memory capacity of 1.12 TB per socket.

  - HL-series CPUs support a memory capacity of 4.5 TB per socket.

- PMems can only be configured in App Direct (AD) mode, and the calculation formula for the total memory capacity is as follows:

  Total memory capacity = Sum of all PMem capacities + Sum of all DDR4 DIMM capacities.

Table 5-10 PMem Specifications

Item	Value		
Capacity per PMem (GB)	128	256	512
Rated speed (MT/s)	3,200	3,200	3,200
Operating voltage (V)	1.2	1.2	1.2
Maximum number of PMems supported in a server[a]	24	24	24
Maximum capacity of PMems supported in a server (GB)[b]	3,072	6,144	12,288
Actual speed (MT/s)	2,666	2,666	2,666
a: The maximum number of PMems supported is based on the 4-processor configuration. The number is halved for the 2-processor configuration. b: The maximum capacity of PMems supported varies with the operating mode of PMems. The above information is for reference only, consult your local Inspur sales representative for details.			

4. Population Rules

- General population rules for PMems:

- DDR4 DIMM types used with PMems include RDIMMs and LRDIMMs.

- A server must use PMems with the same part number (P/N code).

- In a server, DDR4 DIMMs used with PMems must have the same part number (P/N code).

● Population rule for PMems in the specific mode:

- AD mode: In a server, the recommended capacity ratio of DDR4 DIMMs to PMems is between 1:1 and 1:4.

5. DIMM Slot Layout

Up to 24 PMems can be installed in a server, and PMems must be used with DDR4 DIMMs. PMem configuration must be compliant with the PMem population rules.

Figure 5-17 DIMM Slot Layout
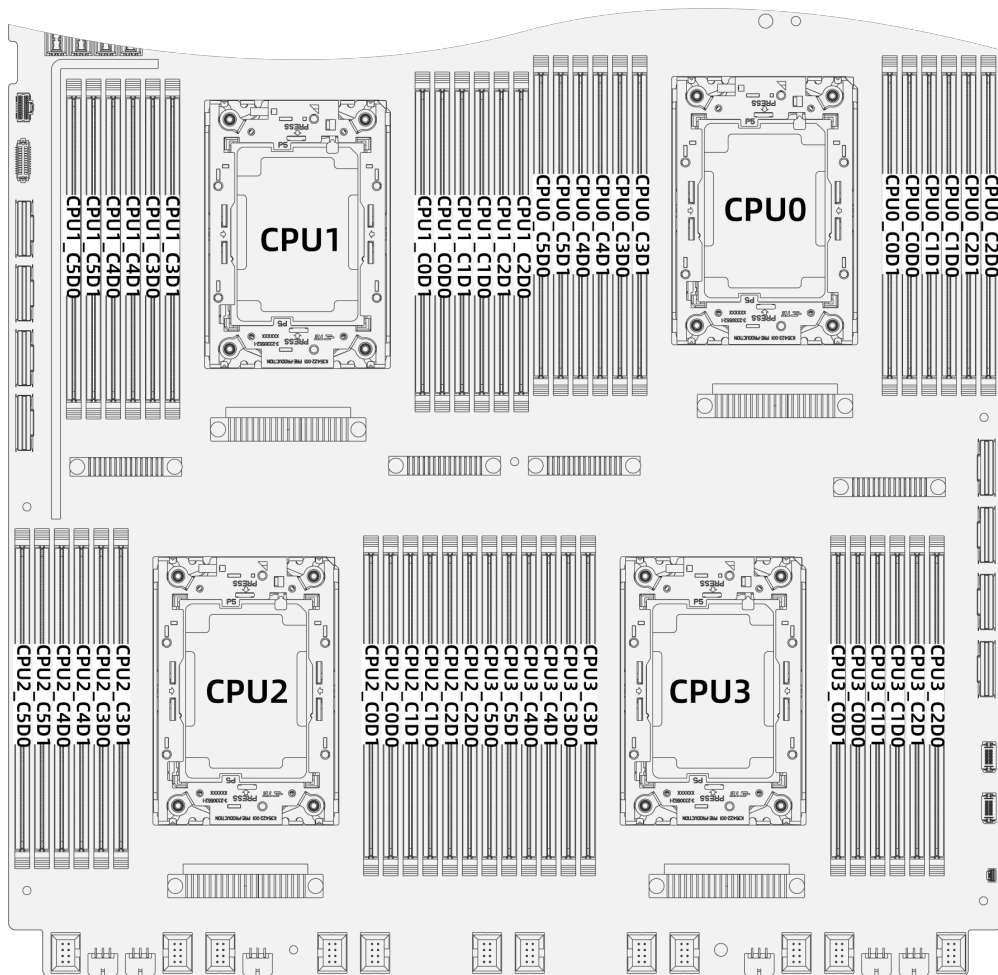
Table 5-11 PMem Population Rules (2-Processor Configuration)

Processor	Channel ID	Memory Slot	Population Rules	
			AD Mode 6+6	
			DDR4	BPS
CPU0	Channel 0	CPU0_C0D0	○	
		CPU0_C0D1		●
	Channel 1	CPU0_C1D0	○	
		CPU0_C1D1		●
	Channel 2	CPU0_C2D0	○	
		CPU0_C2D1		●
	Channel 3	CPU0_C3D0	○	
		CPU0_C3D1		●
	Channel 4	CPU0_C4D0	○	
		CPU0_C4D1		●
	Channel 5	CPU0_C5D0	○	
		CPU0_C5D1		●
CPU1	Channel 0	CPU1_C0D0	○	
		CPU1_C0D1		●
	Channel 1	CPU1_C1D0	○	
		CPU1_C1D1		●
	Channel 2	CPU1_C2D0	○	
		CPU1_C2D1		●
	Channel 3	CPU1_C3D0	○	
		CPU1_C3D1		●
	Channel 4	CPU1_C4D0	○	
		CPU1_C4D1		●
	Channel 5	CPU1_C5D0	○	
		CPU1_C5D1		●

Table 5-12 PMem Population Rules (4-Processor Configuration)

Processor	Channel ID	Memory Slot	Population Rules	
			AD Mode 6+6	
			DDR4	BPS
CPU0	Channel 0	CPU0_C0D0	○	
		CPU0_C0D1		●
	Channel 1	CPU0_C1D0	○	
		CPU0_C1D1		●
	Channel 2	CPU0_C2D0	○	
		CPU0_C2D1		●
	Channel 3	CPU0_C3D0	○	
		CPU0_C3D1		●
	Channel 4	CPU0_C4D0	○	
		CPU0_C4D1		●
	Channel 5	CPU0_C5D0	○	
		CPU0_C5D1		●
CPU1	Channel 0	CPU1_C0D0	○	
		CPU1_C0D1		●
	Channel 1	CPU1_C1D0	○	
		CPU1_C1D1		●
	Channel 2	CPU1_C2D0	○	
		CPU1_C2D1		●
	Channel 3	CPU1_C3D0	○	
		CPU1_C3D1		●
	Channel 4	CPU1_C4D0	○	
		CPU1_C4D1		●
	Channel 5	CPU1_C5D0	○	
		CPU1_C5D1		●
CPU2	Channel 0	CPU2_C0D0	○	
		CPU2_C0D1		●
	Channel 1	CPU2_C1D0	○	
		CPU2_C1D1		●
	Channel 2	CPU2_C2D0	○	
		CPU2_C2D1		●
	Channel 3	CPU2_C3D0	○	
		CPU2_C3D1		●
	Channel 4	CPU2_C4D0	○	
		CPU2_C4D1		●
	Channel 5	CPU2_C5D0	○	
		CPU2_C5D1		●
CPU3	Channel 0	CPU3_C0D0	○	
		CPU3_C0D1		●
	Channel 1	CPU3_C1D0	○	
		CPU3_C1D1		●
	Channel 2	CPU3_C2D0	○	
		CPU3_C2D1		●
	Channel 3	CPU3_C3D0	○	
		CPU3_C3D1		●
	Channel 4	CPU3_C4D0	○	
		CPU3_C4D1		●
	Channel 5	CPU3_C5D0	○	
		CPU3_C5D1		●

5.5 Storage

5.5.1 Drive Configurations

Table 5-13 Drive Configurations

Configuration	Front Drives	Internal Drives	Drive Management Mode
8 × 2.5-inch Drive Pass-Through Configuration	8 × 2.5-inch SAS/SATA drive	M.2 SSDs: supported by the M.2 riser card	SAS/SATA drives: 1 × standard RAID controller card
	8 × 2.5-inch NVMe drive	M.2 SSDs: supported by the M.2 riser card	NVMe drives: directly connected to CPUs
16 × 2.5-inch Drive Pass-Through Configuration	16 × 2.5-inch SAS/SATA drive	M.2 SSDs: supported by the M.2 riser card	SAS/SATA drives: 2 × standard RAID controller card
	16 × 2.5-inch NVMe drive	M.2 SSDs: supported by the M.2 riser card	NVMe drives: directly connected to CPUs
24 × 2.5-inch Drive Pass-Through Configuration	24 × 2.5-inch SAS/SATA drive	M.2 SSDs: supported by the M.2 riser card	SAS/SATA drives: 3 × standard RAID controller card
	24 × 2.5-inch NVMe drive	M.2 SSDs: supported by the M.2 riser card	NVMe drives: directly connected to CPUs
	24 × 2.5-inch drive: • Slots 0 to 7 support only SAS/SATA drives • Slots 8 to 23 support only NVMe drives	M.2 SSDs: supported by the M.2 riser card	• SAS/SATA drives: 1 × standard RAID controller card • NVMe drives: directly connected to CPUs
	24 × 2.5-inch drive: • Slots 0 to 15 support only	M.2 SSDs: supported by the M.2 riser card	• SAS/SATA drives: 2 × standard RAID controller card

Configuration	Front Drives	Internal Drives	Drive Management Mode
	SAS/SATA drives • Slots 16 to 23 support only NVMe drives		• NVMe drives: directly connected to CPUs
25 × 2.5-inch Drive Pass-Through Configuration	25 × 2.5-inch SAS/SATA drive	M.2 SSDs: supported by the M.2 riser card	SAS/SATA drives: 1 × standard RAID controller card
	25 × 2.5-inch drive: • Slots 0 to 20 support only SAS/SATA drives • Slots 21 to 24 support only NVMe drives	M.2 SSDs: supported by the M.2 riser card	• SAS/SATA drives: 1 × standard RAID controller card • NVMe drives: directly connected to CPUs

5.5.2 Drive Numbering

● 8 × 2.5-inch Drive Pass-Through Configuration (8 × SAS/SATA Drive)
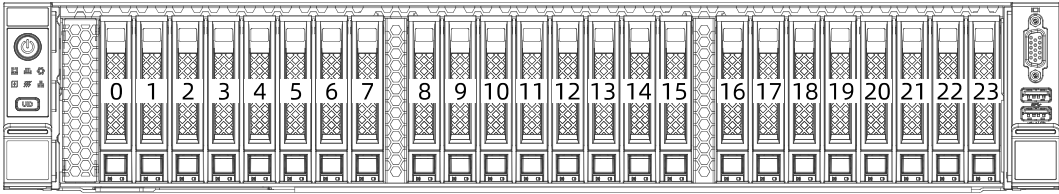
Figure 5-18 Drive Numbering

Physical Drive No.	Drive No. Identified by the ISBMC	Drive No. Identified by the RAID Controller Card
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5

Physical Drive No.	Drive No. Identified by the ISBMC	Drive No. Identified by the RAID Controller Card
6	6	6
7	7	7

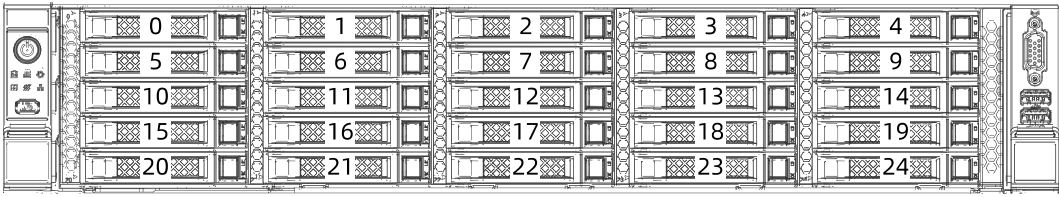● 16 × 2.5-inch Drive Pass-Through Configuration (16 × SAS/SATA Drive)

Figure 5-19 Drive Numbering

Physical Drive No.	Drive No. Identified by the ISBMC	Drive No. Identified by the RAID Controller Card
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	0
9	9	1
10	10	2
11	11	3
12	12	4
13	13	5
14	14	6
15	15	7

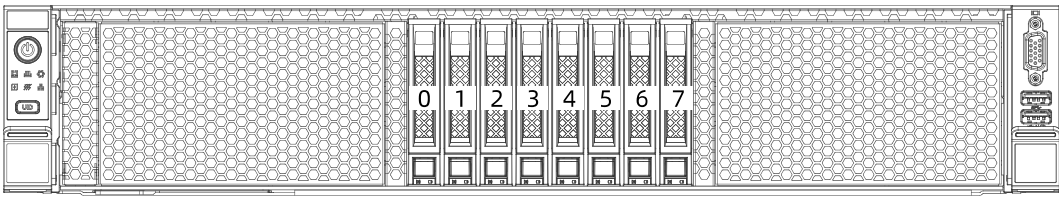● 24 × 2.5-inch Drive Pass-Through Configuration (24 × SAS/SATA Drive)

Figure 5-20 Drive Numbering

Physical Drive No.	Drive No. Identified by the ISBMC	Drive No. Identified by the RAID Controller Card
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	0
9	9	1
10	10	2
11	11	3
12	12	4
13	13	5
14	14	6
15	15	7
16	16	0
17	17	1
18	18	2
19	19	3
20	20	4
21	21	5
22	22	6
23	23	7

● 25 × 2.5-inch Drive Pass-Through Configuration (25 × SAS/SATA Drive)
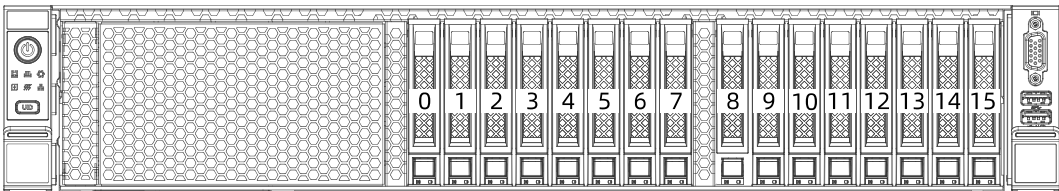
Figure 5-21 Drive Numbering

Physical Drive No.	Drive No. Identified by the ISBMC	Drive No. Identified by the RAID Controller Card
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24

● 8 × 2.5-inch Drive Pass-Through Configuration (8 × NVMe Drive)

Figure 5-22 Drive Numbering

Physical Drive No.	Drive No. Identified by the ISBMC	Drive No. Identified by the RAID Controller Card
0	0	-
1	1	-
2	2	-
3	3	-
4	4	-
5	5	-
6	6	-
7	7	-

● 16 × 2.5-inch Drive Pass-Through Configuration (16 × NVMe Drive)

Figure 5-23 Drive Numbering

Physical Drive No.	Drive No. Identified by the ISBMC	Drive No. Identified by the RAID Controller Card
0	0	-
1	1	-
2	2	-
3	3	-
4	4	-
5	5	-
6	6	-
7	7	-
8	8	-
9	9	-

Physical Drive No.	Drive No. Identified by the ISBMC	Drive No. Identified by the RAID Controller Card
10	10	-
11	11	-
12	12	-
13	13	-
14	14	-
15	15	-

- 24 × 2.5-inch Drive Pass-Through Configuration (24 × NVMe Drive)

Figure 5-24 Drive Numbering

Physical Drive No.	Drive No. Identified by the ISBMC	Drive No. Identified by the RAID Controller Card
0	0	-
1	1	-
2	2	-
3	3	-
4	4	-
5	5	-
6	6	-
7	7	-
8	8	-
9	9	-
10	10	-
11	11	-
12	12	-
13	13	-
14	14	-
15	15	-
16	16	-

Physical Drive No.	Drive No. Identified by the ISBMC	Drive No. Identified by the RAID Controller Card
17	17	-
18	18	-
19	19	-
20	20	-
21	21	-
22	22	-
23	23	-

- 24 × 2.5-inch Drive Pass-Through Configuration (8 × SAS/SATA Drive + 16 × NVMe Drive)
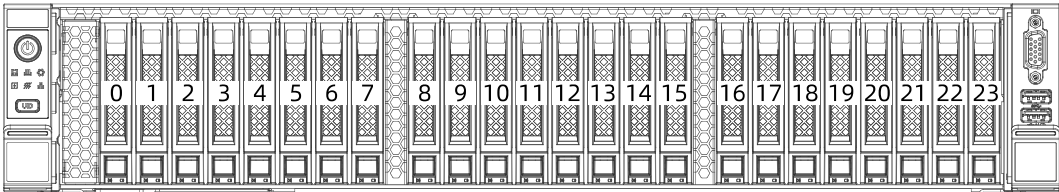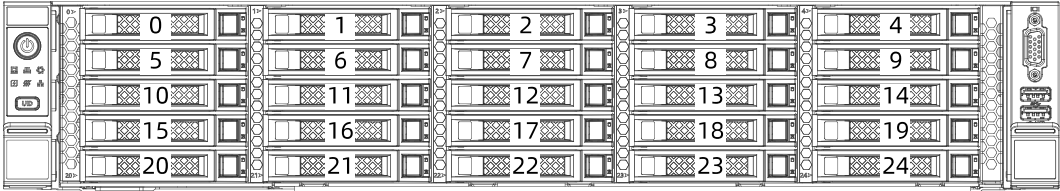
Figure 5-25 Drive Numbering

Physical Drive No.	Drive No. Identified by the ISBMC	Drive No. Identified by the RAID Controller Card
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	-
9	9	-
10	10	-
11	11	-
12	12	-
13	13	-
14	14	-

Physical Drive No.	Drive No. Identified by the ISBMC	Drive No. Identified by the RAID Controller Card
15	15	-
16	16	-
17	17	-
18	18	-
19	19	-
20	20	-
21	21	-
22	22	-
23	23	-

- 24 × 2.5-inch Drive Pass-Through Configuration (16 × SAS/SATA Drive + 8 × NVMe Drive)

Figure 5-26 Drive Numbering

Physical Drive No.	Drive No. Identified by the ISBMC	Drive No. Identified by the RAID Controller Card
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	0
9	9	1
10	10	2
11	11	3
12	12	4

Physical Drive No.	Drive No. Identified by the ISBMC	Drive No. Identified by the RAID Controller Card
13	13	5
14	14	6
15	15	7
16	16	-
17	17	-
18	18	-
19	19	-
20	20	-
21	21	-
22	22	-
23	23	-

- 25 × 2.5-inch Drive Pass-Through Configuration (21 × SAS/SATA Drive + 4 × NVMe Drive)

Figure 5-27 Drive Numbering

Physical Drive No.	Drive No. Identified by the ISBMC	Drive No. Identified by the RAID Controller Card
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10

Physical Drive No.	Drive No. Identified by the ISBMC	Drive No. Identified by the RAID Controller Card
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	-
22	22	-
23	23	-
24	24	-

5.5.3 Drive LEDs

1. SAS/SATA Drive LEDs

Figure 5-28 SAS/SATA Drive LEDs

Activity LED
Error LED
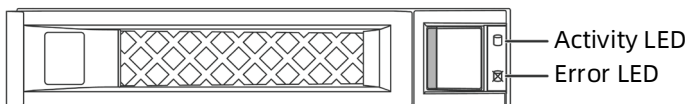
Table 5-14 SAS/SATA Drive LEDs

Activity LED (Green)	Error LED (Blue/Red)			Description
	Blue	Red		
Off	Off	RAID	No RAID	Drive absent
		Solid on	Off	
Solid on	Off	Off		Drive present but not in use
Flashing	Off	Off		Drive present and in use
Flashing	Solid pink			Copyback/Rebuild in progress

Activity LED (Green)	Error LED (Blue/Red)		Description
	Blue	Red	
Solid on	Solid on	Off	Drive selected but not in use
Flashing	Solid on	Off	Drive selected and in use
Off	Solid on	Off	Drive selected but failed
Any status	Off	Solid on	Drive failed

2. NVMe Drive LEDs

Figure 5-29 NVMe Drive LEDs
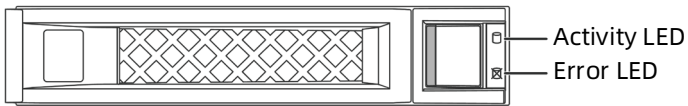
When the VMD function is enabled with the VMD driver installed, the NVMe drives support surprise hot swap.

Table 5-15 NVMe Drive LEDs

Activity LED (Green)	Error LED (Blue/Red)		Description
	Blue	Red	
Off	Off	Off	Drive absent
Solid on	Off	Off	Drive present but not in use
Flashing	Off	Off	Drive present and in use
Flashing	Solid pink		Copyback/Rebuild/Initializing /Verifying in progress
Solid on	Solid on	Off	Drive selected but not in use
Flashing	Solid on	Off	Drive selected and in use
Off	Solid on	Off	Drive selected but failed
Any status	Off	Solid on	Drive failed

5.5.4 RAID Controller Cards

The RAID controller card provides functions such as RAID configuration, RAID level migration, and drive roaming. For specific RAID controller card options, consult your local Inspur sales representative or refer to 7.2 Hardware Compatibility.

5.6 Network

NICs provide network expansion capabilities.

- The OCP I/O slot supports the OCP 3.0 card. Users can select the OCP 3.0 card as needed.

- The PCIe expansion slots support PCIe NICs. Users can select the PCIe cards as needed.

- For specific network options, consult your local Inspur sales representative or refer to 7.2 Hardware Compatibility.

5.7 I/O Expansion

5.7.1 PCIe Cards

PCIe cards provide system expansion capabilities.

- The server supports up to 13 PCIe 3.0 expansion slots, including 1 dedicated slot for the OCP 3.0 card.

- For specific PCIe card options, consult your local Inspur sales representative or refer to 7.2 Hardware Compatibility.

- There will be I/O resource conflicts if the number of PCIe expansion cards exceeds 12. Consult your local Inspur sales representative.
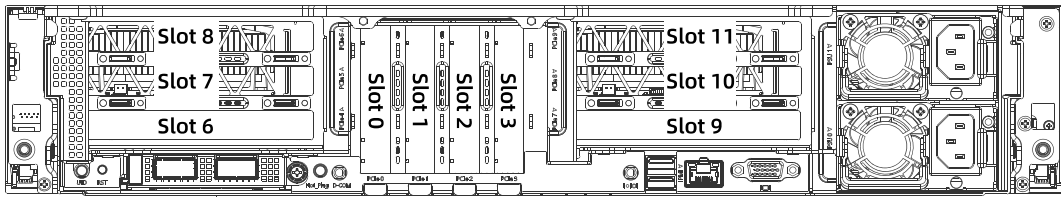
5.7.2 PCIe Slots

1. PCIe Slot Locations

Figure 5-30 PCIe Slots - General Configuration
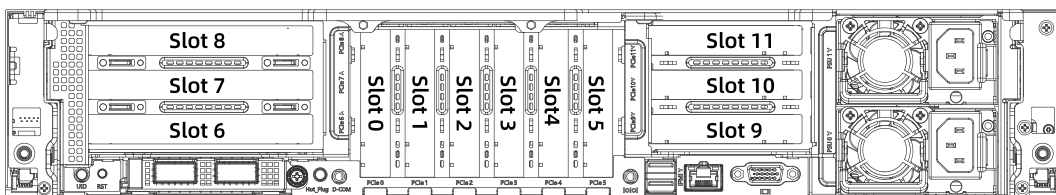
- PCIe riser module 0 provides Slot 6, Slot 7, and Slot 8.

- PCIe riser module 1 provides Slot 9, Slot 10, and Slot 11.

- The motherboard provides Slot 0, Slot 1, Slot 2, Slot 3, Slot 4, and Slot 5.

Figure 5-31 PCIe Slots - GPU Configuration

- PCIe riser module 0 provides Slot 6, Slot 7, and Slot 8. Dual-slot GPUs can be installed into Slot 6 and Slot 8 only, and single-slot GPUs can be installed into Slot 7 and Slot 8 only.

- PCIe riser module 1 provides Slot 9, Slot 10, and Slot 11. Dual-slot GPUs can be installed into Slot 9 and Slot 11 only, and single-slot GPUs can be installed into Slot 10 and Slot 11 only.

- The motherboard provides Slot 0, Slot 1, Slot 2, and Slot 3.

2. PCIe Riser Modules (for configurations with PCIe riser modules on the rear panel)

- PCIe Riser Module (2 × PCIe x16 Slot + 1 × PCIe x8 Slot)

  - Provides Slot 6, Slot 7, and Slot 8 when installed in PCIe riser module 0.

  - Provides Slot 9, Slot 10, and Slot 11 when installed in PCIe riser module 1.
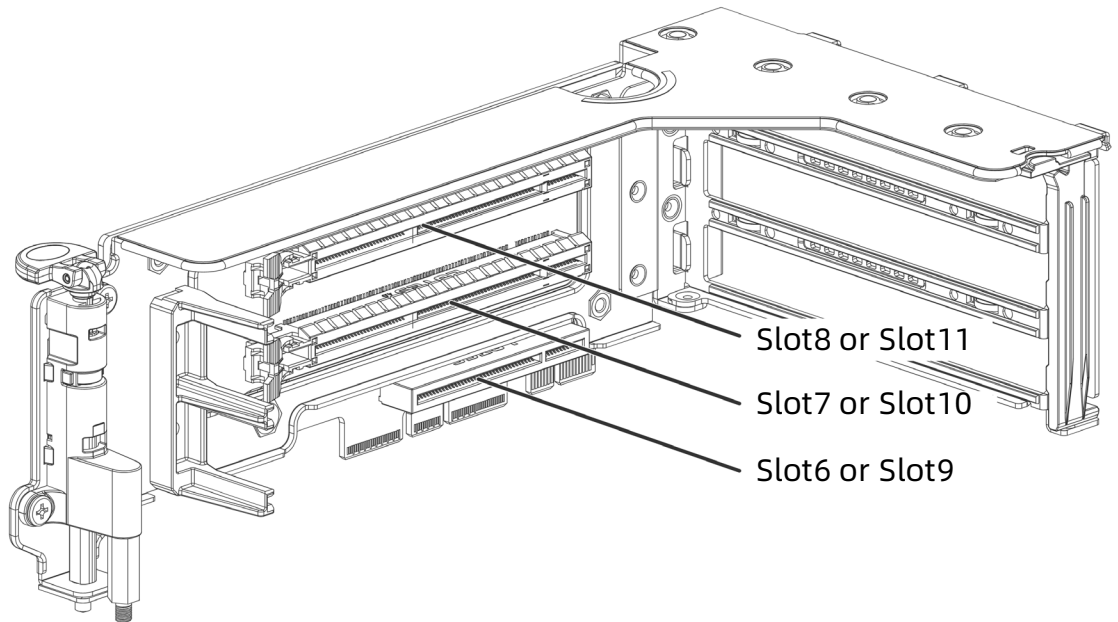
Figure 5-32 PCIe Riser Module (2 × PCIe x16 Slot + 1 × PCIe x8 Slot)
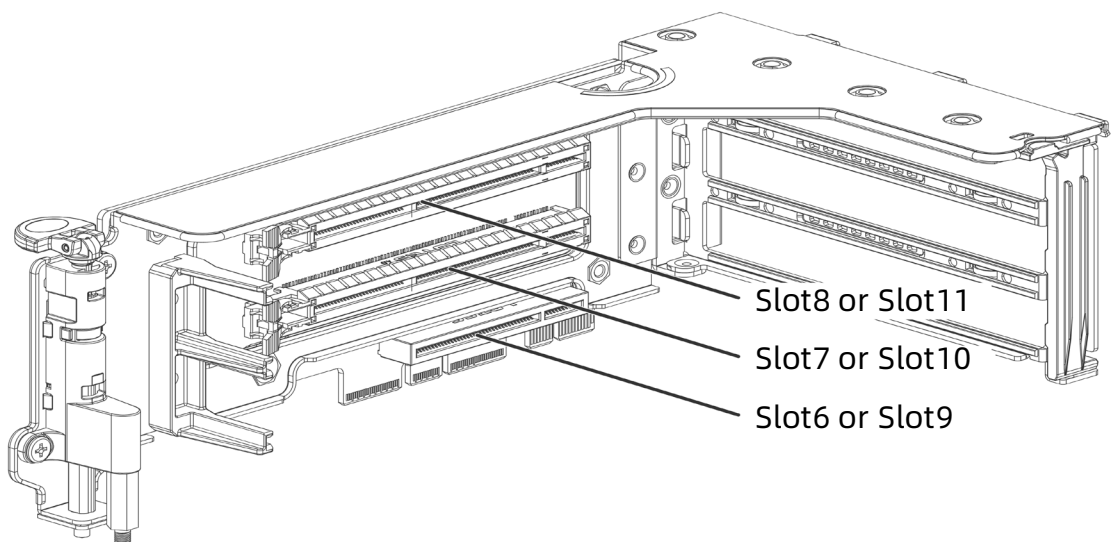
- PCIe Riser Module (3 × PCIe x8 Slot)

  - Provides Slot 6, Slot 7, and Slot 8 when installed in PCIe riser module 0.

- Provides Slot 9, Slot 10, and Slot 11 when installed in PCIe riser module 1.

Figure 5-33 PCIe Riser Module (3 × PCIe x8 Slot)

Slot8 or Slot11

Slot7 or Slot10

Slot6 or Slot9

- PCIe Riser Module (GPU Configuration)

  - Provides Slot 6, Slot 7, and Slot 8 when installed in PCIe riser module 0.

  - Provides Slot 9, Slot 10, and Slot 11 when installed in PCIe riser module 1.
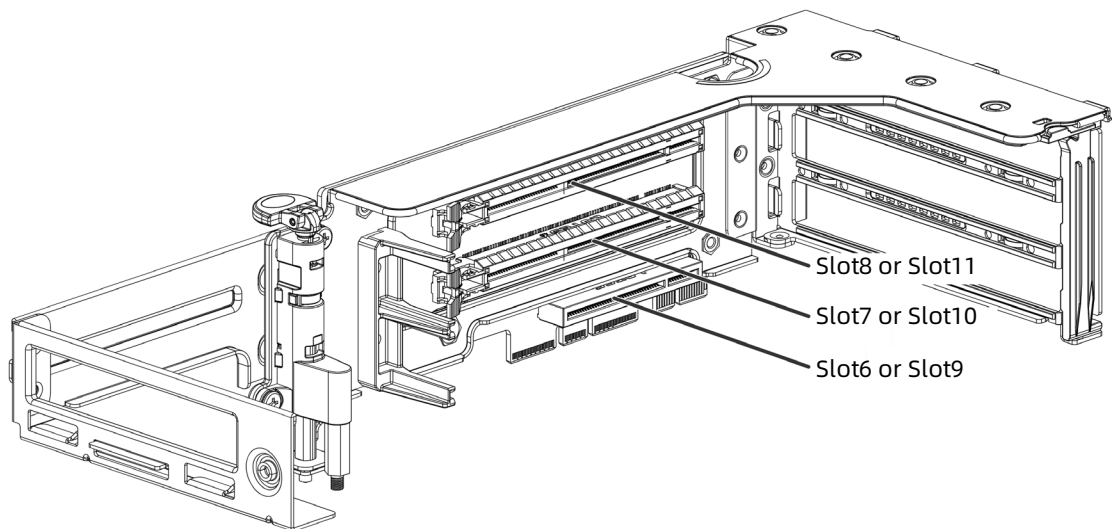
Figure 5-34 PCIe Riser Module (GPU Configuration)

Slot8 or Slot11

Slot7 or Slot10

Slot6 or Slot9

5.7.3 PCIe Slot Description

▣ NOTE

When CPU2 and CPU3 are absent, the corresponding PCIe slots are not available.

For configurations with PCIe riser modules on the rear panel:

Table 5-16 PCIe Slot Description

PCIe Slot	CPU	PCIe Standard	Connector Width	Bus Width	Port No.	Root Port (B/D/F)	Slot Size
Slot 0	CPU0	PCIe 3.0	x16	x16	3	32:00.0	HHHL
Slot 1	CPU1	PCIe 3.0	x16	x16	6	57:00.0	HHHL
Slot 2	CPU3	PCIe 3.0	x8	x8	17	ec:02.0	HHHL
Slot 3	CPU1	PCIe 3.0	x8	x8	4	43:00.0	HHHL
Slot 4	CPU1	PCIe 3.0	x8	x8	5	43:02.0	HHHL
Slot 5	CPU2	PCIe 3.0	x8	x8	10	97:02.0	HHHL
Slot 6	CPU0	PCIe 3.0	x8	• 3 × x8 slot PCIe riser module: x8 • 2 × x16 + 1 × x8 slot PCIe riser module: x8	23	15:02.0	FHHL
Slot 7	CPU0	PCIe 3.0	x8/x16	• 3 × x8 slot PCIe riser module: x8	22	15:00.0	• GPU config. : FHFL • Non-GPU

PCIe Slot	CPU	PCIe Standard	Connector Width	Bus Width	Port No.	Root Port (B/D/F)	Slot Size
				• 2 × x16 + 1 × x8 slot PCIe riser module: x16			config. : FHHL
Slot 8	CPU3	PCIe 3.0	x8/x16	• 3 × x8 slot PCIe riser module: x8 • 2 × x16 + 1 × x8 slot PCIe riser module: x16	52 49	c3:02.0 c3:00.0	• GPU config. : FHFL • Non-GPU config. : FHHL
Slot 9	CPU1	PCIe 3.0	x8	• 3 × x8 slot PCIe riser module: x8 • 2 × x16 + 1 × x8 slot PCIe riser module: x8	28	6c:00.0	• GPU config. : FHHL • Non-GPU config. : HHHL
Slot 10	CPU1	PCIe 3.0	x8/x16	• 3 × x8 slot PCIe riser module: x8 • 2 × x16 + 1 × x8 slot PCIe riser	29	6c:02.0	• GPU config. : FHHL • Non-GPU config. : HHHL

PCIe Slot	CPU	PCIe Standard	Connector Width	Bus Width	Port No.	Root Port (B/D/F)	Slot Size
				module: x16			
Slot 11	CPU2	PCIe 3.0	x8/x16	• 3 × x8 slot PCIe riser module: x8 • 2 × x16 + 1 × x8 slot PCIe riser module: x16	35 34	83:00.0	• GPU config. : FHHL • Non-GPU config. : HHHL
OCP 3.0 Slot	CPU0	PCIe 3.0	x16	x16	2	23:00.0	Standard OCP 3.0 specs

5.8 PSUs

- The server supports 1 or 2 PSUs.

- The server supports AC or DC power input.

- The PSUs are hot-swappable.

- The server supports 2 PSUs in 1+1 redundancy.

- The server must use PSUs with the same part number (P/N code).

Figure 5-35 PSU Locations
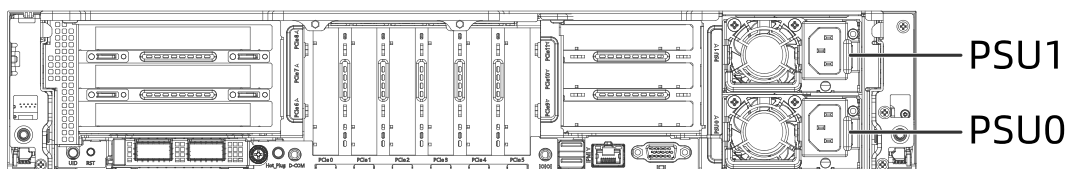
5.9 Fans

- The server supports 6 fan modules. Users can select 6038 or 6056 fans according to different configurations.

- The fans are hot-swappable.

- The server supports fans in N+1 redundancy, which means that the server can continue working properly when a single fan fails.

- The server supports intelligent fan speed control.

- The server must use fans with the same part number (P/N code).

Figure 5-36 Fan Module Locations
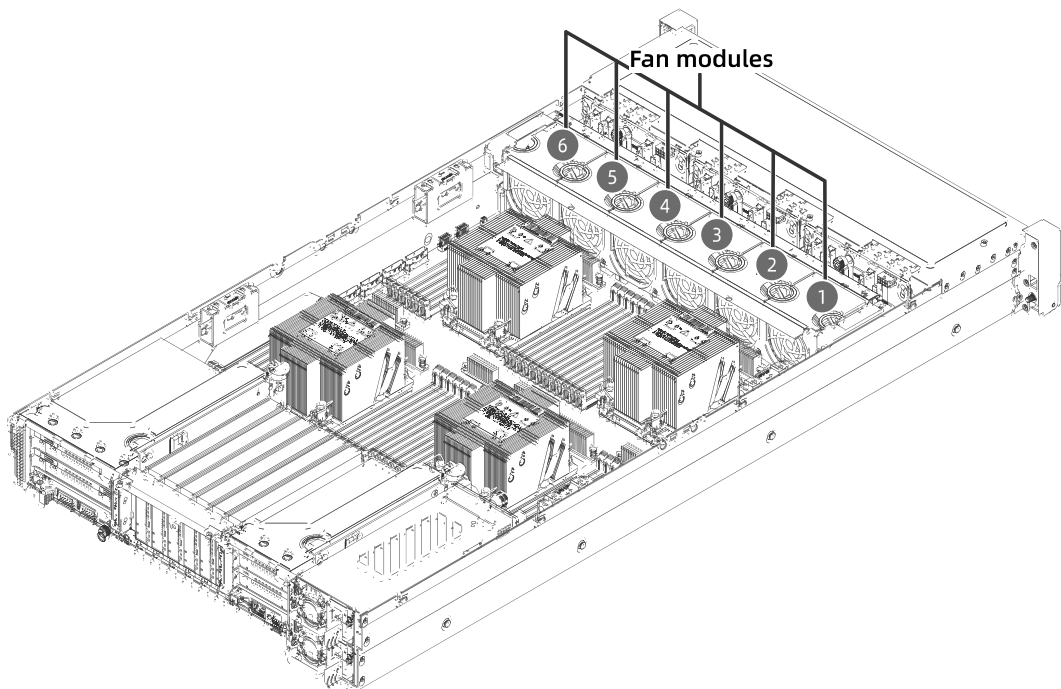
5.10 LCD Module (Optional)

5.10.1 Function

The LCD module reads server-related information from the BMC, such as the operating status of processors and memories, network status, logs, and alerts, and transmits the information to client mobile terminals via Bluetooth.

The LCD module synchronizes information with the ISBMC through I²C and can display information on an LCD screen or in the app. The server's basic information, system status and alert diagnosis can be displayed in the app via Bluetooth, facilitating the operation and maintenance.

Figure 5-37 How LCD Subsystem Works
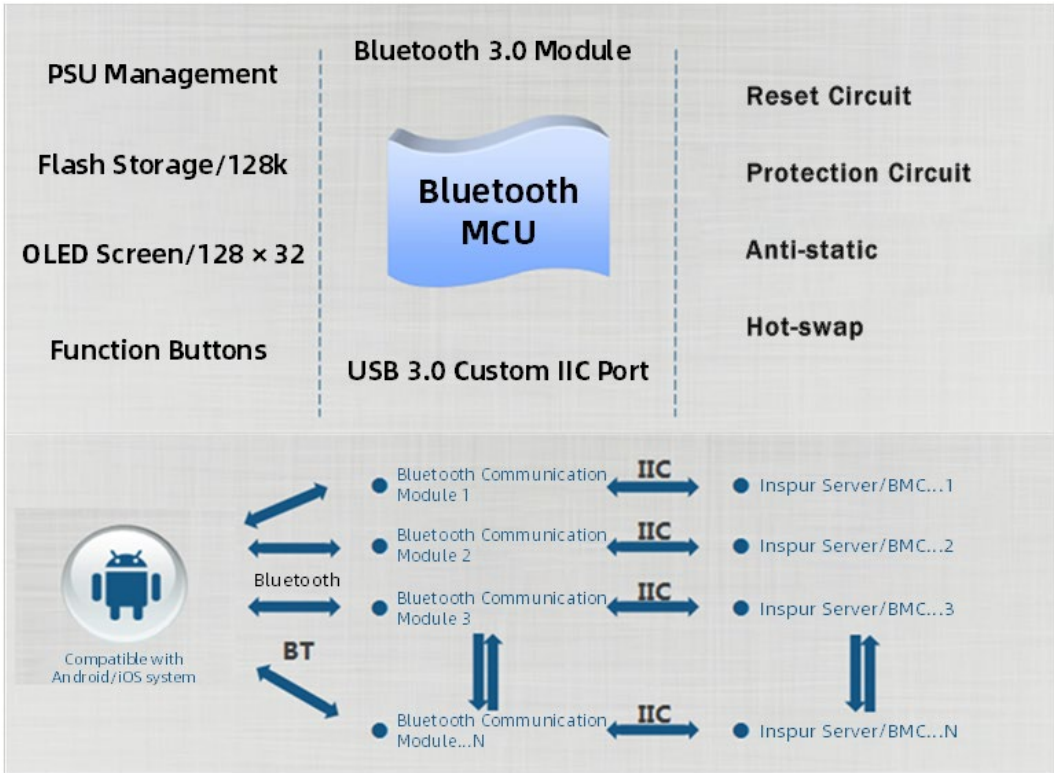
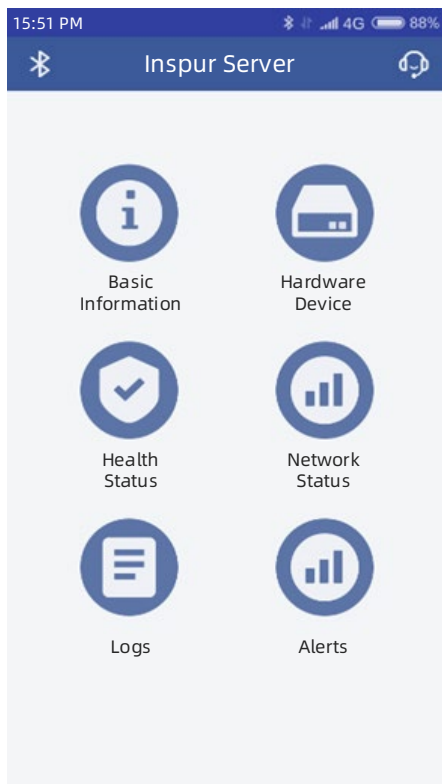## 5.10.2 Interface

Figure 5-38 App Home Screen

5.11 Boards

5.11.1 Motherboard

Figure 5-39 Motherboard Layout
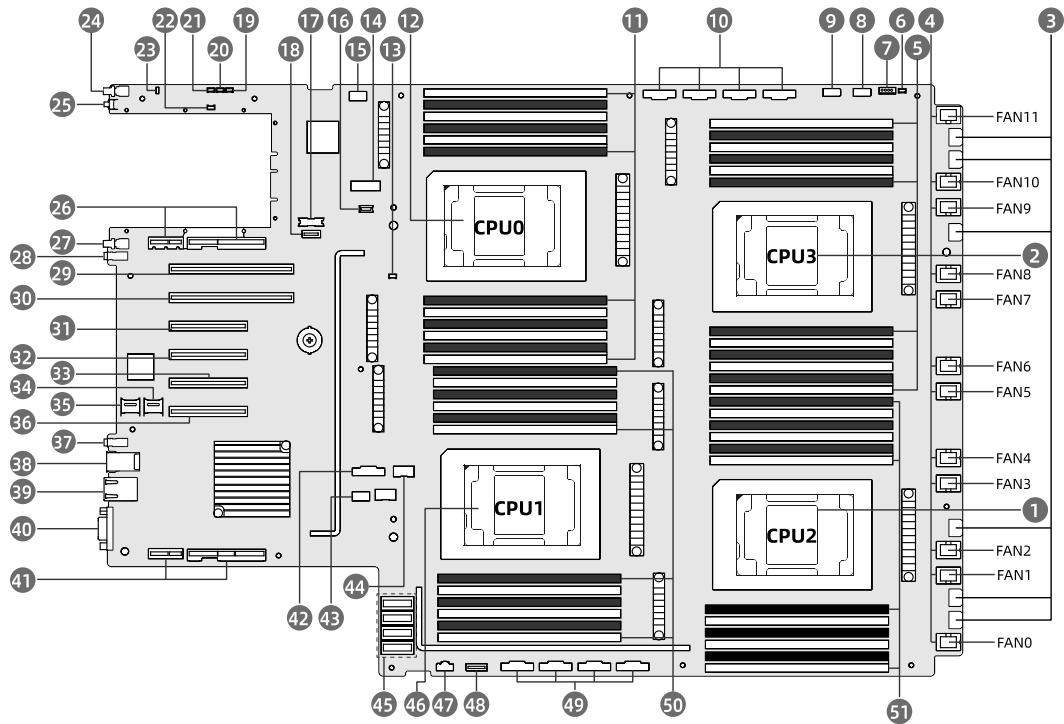
Item	Feature	Item	Feature
1	CPU2	27	OCP Hot-Plug Button
2	CPU3	28	BMC Debug Serial Port
3	Drive Backplane Power Connector × 6	29	PCIe0_CPU0 Slot
4	Fan Connector × 12	30	PCIe1_CPU1 Slot
5	DIMM Slots (CPU3)	31	PCIe2_CPU3 Slot
6	Sensor_Cable Connector	32	PCIe3_CPU1 Slot
7	VROC Key Connector	33	PCIe4_CPU1 Slot
8	CPU01_VPP Connector	34	System TF Card Slot
9	CPU23_VPP Connector	35	BMC TF Card Slot
10	Slimline Connector × 4	36	PCIe5_CPU2 Slot
11	DIMM Slots (CPU0)	37	System Serial Port
12	CPU0	38	USB 3.0 Port × 2
13	Intrusion Switch Connector	39	BMC Management Network Port
14	XDP Connector	40	VGA Port
15	Right Control Panel Signal Cable Connector	41	PCIe_Riser1 Slot

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Item	Feature	Item	Feature
16	TCM/TPM Connector	42	M.2_Riser Connector
17	NIC_NC-SI Connector	43	SLIM_SATA Connector
18	TPCM Connector	44	Internal USB Port
19	Drive Backplane I^{2}C Connector 2	45	Power Connector × 4
20	Drive Backplane I^{2}C Connector 1	46	CPU1
21	Drive Backplane I^{2}C Connector 0	47	Power Backplane Signal Cable Connector
22	Drive Backplane I^{2}C Connector 3	48	Left Control Panel Signal Cable Connector
23	CLR_CMOS	49	Slimline Connector × 4
24	UID/BMC RST Button	50	DIMM Slots (CPU1)
25	System Reset Button	51	DIMM Slots (CPU2)
26	PCIe_Riser0 Slot		

5.11.2 Drive Backplanes

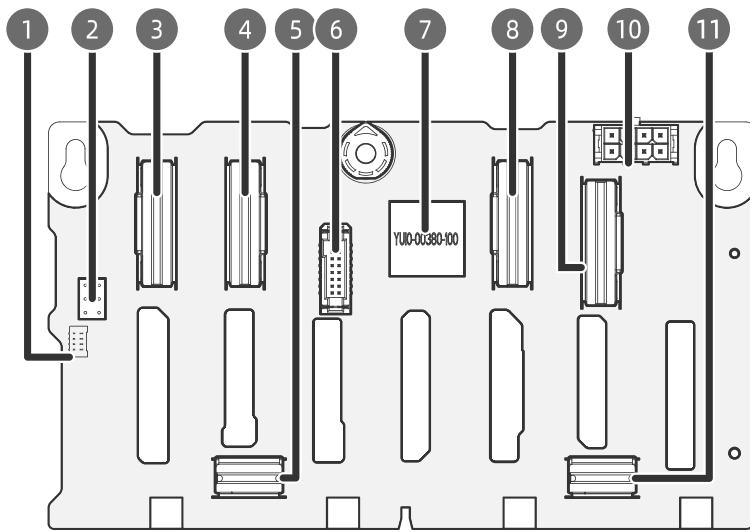## 1. Front Drive Backplanes

Figure 5-40 8 × 2.5-inch Drive Pass-Through Backplane (8 × SAS/SATA Drive)
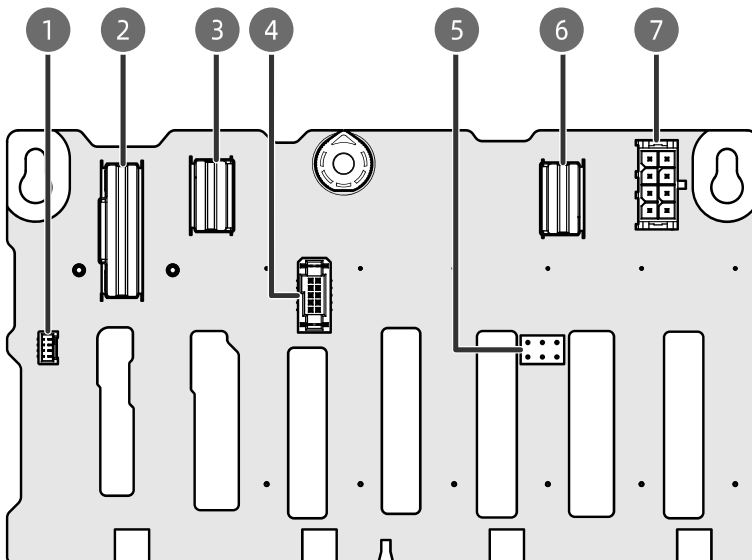
Item	Feature	Item	Feature
1	BMC I^{2}C Connector	2	Slimline x8 Connector
3	Slimline x4 Connector 1	4	VPP Connector
5	CPLD JTAG Connector	6	Slimline x4 Connector 2
7	Power Connector		

Figure 5-41 8 × 2.5-inch Drive Pass-Through Backplane (8 × SAS/SATA/NVMe Drive)

Item	Feature	Item	Feature
1	BMC I^{2}C Connector	2	CPLD JTAG Connector
3	Slimline x8 Connector 1	4	Slimline x8 Connector 2
5	Slimline x4 Connector 1	6	VPP Connector
7	CPLD Chip	8	Slimline x8 Connector 3
9	Slimline x8 Connector 4	10	Power Connector
11	Slimline x4 Connector 2		

Figure 5-42 25 × 2.5-inch Drive Pass-Through Backplane (21 × SAS/SATA Drive + 4 × SAS/SATA/NVMe Drive)
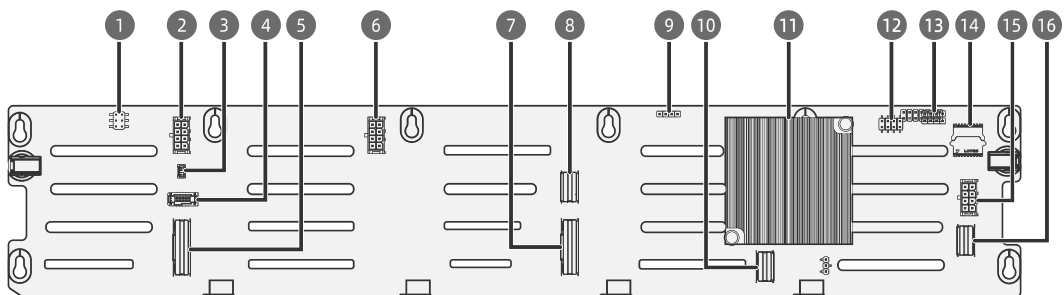
Item	Feature	Item	Feature
1	CPLD JTAG Connector	2	Power Connector 1
3	BMC I^{2}C Connector	4	VPP Connector
5	Slimline x8 Connector 1	6	Power Connector 2
7	Slimline x8 Connector 2	8	Slimline x4 Connector 1
9	Expander Chip Debug Connector 1	10	Slimline x4 Connector 2

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Item	Feature	Item	Feature
11	Expander Chip	12	Expander Chip Debug Connector 2
13	Expander Chip Debug Connector 3	14	Expander Flash
15	Power Connector 2	16	Slimline x4 Connector 3

2. Internal Drive Backplane

Figure 5-43 2 × M.2 Drive Pass-Through Backplane (2 × SATA/NVMe M.2 SSD)
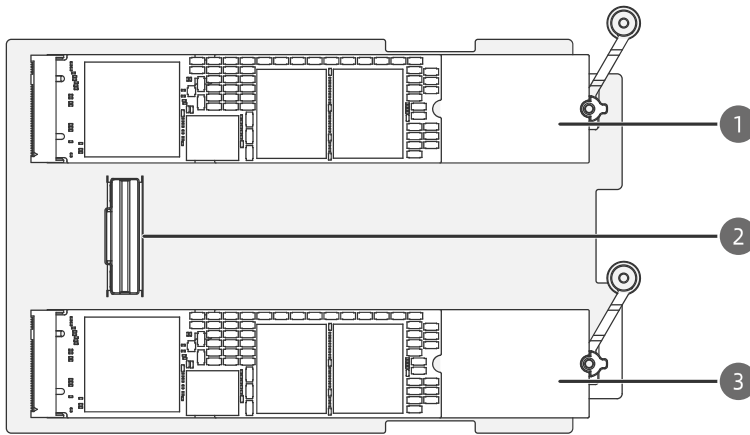
Item	Feature	Item	Feature
1	M.2 SSD 1	2	Slimline x8 Connector
3	M.2 SSD 2		

6 Product Specifications

6.1 Technical Specifications

Table 6-1 Technical Specifications

Item	Description
Form Factor	2U rack server
Chipset	Intel C621A
Processor	Supports 2 or 4 processors. • 3rd Gen Intel Xeon Scalable processors (Cooper Lake) • Integrated memory controllers and 6 memory channels per processor • Integrated PCIe controllers with PCIe 3.0 supported and 48 lanes per processor • 6 UPI links at up to 10.4 GT/s • Up to 28 cores • Maximum base frequency at 3.9 GHz (8 cores) • Minimum L3 cache per core of 1.375 MB • TDP up to 250 W Note: The information above is for reference only, see 7.2 Hardware Compatibility for details.

Memory	Supports 48 DIMM slots.
	
	• Up to 48 DDR4 DIMMs
	
	  - RDIMM or LRDIMM
	
	  - Up to 3,200 MT/s
	
	  - Mixing DDR4 DIMMs of different types (RDIMM and LRDIMM) and specifications (such as capacity, bit width, rank, and height) is not supported.
	
	  - A server must use DDR4 DIMMs with the same part number (P/N code).
	
	• Up to 24 PMems

Item	Description
	- PMems must be used with DDR4 DIMMs and up to 1 PMem can be installed in each memory channel. - PMems currently support AD mode. - Up to 2,666 MT/s - Mixing PMems of different specifications (such as capacity and rank) is not supported. Note: The information above is for reference only, see 7.2 Hardware Compatibility for details.
Storage	Supports multiple drive configurations, see 5.5.1 Drive Configurations for details. • Supports 2 M.2 SSDs - When the server is configured with an SND 9230 RAID controller card, the M.2 SSDs support RAID configuration. - When the server is configured with an M.2 riser card, the M.2 SSDs support VROC (SATA/PCIe RAID) configuration. Notes: • It is recommended that the M.2 SSD is only used as a boot device for installing the OS. • The M.2 SSD has low endurance and cannot be used as a data storage device. • For data storage, use enterprise-class SSDs or HDDs with higher DWPD. • Write-intensive business software will cause the M.2 SSD to reach write endurance and wear out; therefore, the M.2 SSD is not recommended for such business scenarios. • Do not use the M.2 SSD as caching. • Supports hot-swap SAS/SATA/NVMe drives Note: VMD is disabled by default in BIOS. • Supports multiple models of RAID controller cards. See 7.2 Hardware Compatibility for details.
Network	Supports multiple types of networks for expansion. • OCP 3.0 card - Supports 1 OCP 3.0 card, which can be selected as required - Hot-swappable

Item	Description
	Note: The RHEL 7.9 OS supports hot-swap; the Windows Server 2019 OS supports hot-swap when it starts up with the OCP 3.0 card installed; the RHEL 8.x OS does not support hot-swap.
I/O Expansion	Supports PCIe expansion slots. For server models with PCIe riser modules on the rear panel: 1 dedicated expansion slot for the OCP 3.0 card and 12 standard PCIe expansion slots. For details, see 5.7.2 PCIe Slots and 5.7.3 PCIe Slot Description.
Port	Supports multiple ports. • Front panel ports: - 1 × USB 2.0 port - 1 × USB 3.0 port - 1 × DB15 VGA port • Rear panel ports: - 2 × USB 3.0 port - 1 × DB15 VGA port - 2 × 3.5 mm audio jack - 1 × BMC management network port Note: OS installation on the USB storage media is not recommended.
Graphics Card	Integrated graphics chip on the motherboard with a video memory of 64 MB and a maximum 16M color resolution of 1,920 × 1,200 at 60 Hz. Notes: • The integrated graphics card can support a maximum resolution of 1,920 × 1,200 only when the graphics driver matching the OS version is installed; otherwise only the default resolution of the OS is supported. • When the front and rear VGA ports are both connected to monitors, only the monitor connected to the front VGA port works.
System Management	• UEFI • ISBMC • NC-SI • Inspur Physical Infrastructure Manager
Security Feature	• Intel Platform Firmware Resilience (PFR)

Item	Description
	• Trusted Platform Module (TPM 2.0) and Trusted Cryptography Module (TCM) • Intel Trusted Execution Technology • Firmware update mechanism based on digital signatures • UEFI Secure Boot • Hierarchical BIOS password protection • BIOS Secure Flash and BIOS Lock Enable (BLE) • BMC and BIOS dual-image mechanism • Chassis intrusion detection

6.2 Environmental Specifications

Table 6-2 Environmental Specifications

Parameter	Description
Temperature[1, 2, 3]	• Operating: 5°C to 45°C (41°F to 113°F) • Storage (packed): -40°C to +70°C (-40°F to +158°F) • Storage (unpacked): -40°C to +55°C (-40°F to +131°F)
Relative Humidity (RH, non-condensing)	• Operating: 5% to 90% RH • Storage (packed): 5% to 93% RH • Storage (unpacked): 5% to 93% RH
Operating Altitude	≤3,050 m (10,007 ft)
Corrosive Gaseous Contaminants	Maximum growth rate of corrosion film thickness: • Copper coupon: 300 Å/month (compliant with the gaseous corrosivity level of G1 defined in ANSI/ISA-71.04-2013) • Silver coupon: 200 Å/month (compliant with the gaseous corrosivity level of G1 defined in ANSI/ISA-71.04-2013)

Parameter	Description

Noise[4, 5, 6]	Noise emissions are measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109). Listed are the declared A-weighted sound power levels (LWAd) and the declared average bystander position A-weighted sound pressure levels (LpAm) at a server operating temperature of 23°C (73.4°F):
	
	• Idle:
	
	   - LWAd: 5.8 B for standard configuration
	
	   - LpAm: 49.0 dBA for standard configuration
	
	• Operating:
	
	   - LWAd: 6.4 B for standard configuration
	
	   - LpAm: 53 dBA for standard configuration

Notes:

1. Not all configurations support an operating temperature range of 5°C to 45°C (41°F to 113°F). The GPU configurations support an operating temperature range of 10°C to 30°C (50°F to 86°F).

2. Standard operating temperature

   - For temperatures between 10°C and 35°C (50°F and 95°F), de-rate the maximum allowable temperature by 1°C per 305 m (1°F per 556 ft) above sea level. The maximum temperature gradient is 20°C/h (36°F/h) and the maximum operating altitude is 3,050 m (10,007 ft), both varying with server configuration.

   - Any fan failure or operations above 30°C (86°F) may lead to system performance degradation.

3. Expanded operating temperature

   - According to the A3 standard of ASHRAE, as for certain approved configurations, the supported temperature range at the inlet of the server can be expanded to 5°C to 10°C (41°F to 50°F) and 35°C to 40°C (95°F to 104°F) at sea level. At an altitude of 900 to 3,050 m (2,953 to 10,007 ft) above sea level, de-rate the maximum allowable temperature by 1.0°C per 175 m (1°F per 319 ft).

   - According to the A4 standard of ASHRAE, as for certain approved configurations, the supported temperature range at the inlet of the server

can be expanded to 40°C to 45°C (104°F to 113°F) at sea level. At an altitude of 900 to 3,050 m (2,953 to 10,007 ft) above sea level, de-rate the maximum allowable temperature by 1.0°C per 125 m (1°F per 228 ft).

- Any fan failure or operations under expanded operating temperature may lead to system performance degradation.

4. This document lists the LWAd and LpAm of the product at a 23°C (73.4°F) ambient environment. All measurements are conducted in conformance with ISO 7779 (ECMA 74) and declared in conformance with ISO 9296 (ECMA 109). The listed sound levels apply to the standard configuration. Additional options may result in increased sound levels. Contact your sales representative for more information.

5. The sound levels shown here were measured based on a specific configuration of the server. Sound levels vary with server configuration. These values are for reference only and subject to change without notice.

6. Product conformance to cited normative standards is based on sample testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.

6.3 Physical Specifications

Table 6-3 Physical Specifications

Item	Description
Dimensions (W × H × D)	• With mounting ears: 482.4 × 87 × 867.5 mm (18.99 × 3.43 × 34.15 in.) • Without mounting ears: 435 × 87 × 841 mm (17.13 × 3.43 × 33.11 in.) • Outer packaging: 671 × 302 × 1,161 mm (26.42 × 11.89 × 45.71 in.)
Installation Dimension Requirements	• Installation requirements for the cabinet are as follows: - General cabinet compliant with the International Electrotechnical Commission 297 (IEC 297) standard - Width: 482.6 mm (19 in.) - Depth: Above 1,000 mm (39.37 in.) • Installation requirements for the server rails are as follows:

Item	Description
	- L-bracket static rail kit: applicable to cabinets with a distance of 609 to 914 mm (23.98 to 35.98 in.) between the front and rear mounting flanges - Ball-bearing rail kit: applicable to cabinets with a distance of 609 to 914 mm (23.98 to 35.98 in.) between the front and rear mounting flanges

Weight	• 25 × 2.5-inch drive configuration (with 25 drives loaded)
	
	  - Net weight: 34 kg (74.96 lbs)
	
	  - Gross weight (including chassis, packaging, rails and accessory box): 41 kg (90.39 lbs)
	
	• 24 × 2.5-inch drive configuration (with 24 drives loaded)
	
	  - Net weight: 31 kg (68.34 lbs)
	
	  - Gross weight (including chassis, packaging, rails and accessory box): 40 kg (88.18 lbs)
	
	• 8 × 2.5-inch drive configuration (with 2 GPUs + 8 drives loaded)
	
	  - Net weight: 30 kg (66.14 lbs)
	
	  - Gross weight (including chassis, packaging, rails and accessory box): 41 kg (90.39 lbs)

Power Consumption	Power consumption varies with configurations. Consult Inspur Customer Service for details.

7 Operating System and Hardware Compatibility

This section describes the OS and hardware compatibility of the NF8260M6. For the latest compatibility configuration and the component models not listed in this document, contact your local Inspur sales representative.

ⓘ IMPORTANT

- Using incompatible components may cause the server to work abnormally, and such failures are not covered by technical support or warranty.
- The server performance is strongly influenced by application software, middleware and hardware. The subtle differences in them may lead to performance variation in the application and test software.
  - For requirements on the performance of specific application software, contact Inspur sales representatives to confirm the detailed hardware and software configurations during the pre-sales phase.
  - For requirements on hardware performance consistency, define specific configuration requirements (for example, specific drive models, RAID controller cards, or firmware versions) during the pre-sales phase.

7.1 Supported Operating Systems

Table 7-1 Supported Operating Systems

OS Manufacturer	Version
Microsoft	Windows Server 2016
	Windows Server 2019
Red Hat	Red Hat Enterprise Linux 7.9
	Red Hat Enterprise Linux 8.2
SUSE	SLES 15.2
	SLES 12.5
Oracle	Oracle Linux 7.9
	Oracle Linux 8.2

7.2 Hardware Compatibility

7.2.1 CPU Specifications

The NF8260M6 supports up to 4 Intel Xeon Scalable processors. The 83XX and 63XX series support up to 3,200 MHz, and the 53XX series supports up to 2,933 MHz.

Table 7-2 CPU Specifications

Model	Cores	Threads	Base Frequency (GHz)	Max. Turbo Frequency (GHz)	Cache (MB)	TDP (W)
8380H	28	56	2.9	3.8	38.5	250
8380HL	28	56	2.9	3.8	38.5	250
8376H	28	56	2.6	3.5	38.5	205
8376HL	28	56	2.6	3.5	38.5	205
8360H	24	48	3.0	3.8	33	225
8360HL	24	48	3.0	3.8	33	225
8356H	8	16	3.9	4.3	35.75	190
8354H	18	36	3.1	4.0	24.75	205
8353H	18	36	2.5	3.3	24.75	150
6348H	24	48	2.3	3.1	33	165
6330H	24	48	2.0	2.8	33	150
6328H	16	32	2.8	3.7	22	165
6328HL	16	32	2.8	3.7	22	165
5320H	20	40	2.4	3.3	27.5	150
5318H	18	36	2.5	3.3	24.75	150

7.2.2 DIMM Specifications

The NF8260M6 supports up to 48 DDR4 DIMMs. Each processor supports 6 memory channels with 2 memory slots per channel. The supported memory types include RDIMM, LRDIMM and BPS.

Table 7-3 DIMM Specifications

Type	Capacity (GB)	Frequency (MHz)	Data Width	Organization
RDIMM	16	3,200	x72	1R x4/2R x8
RDIMM	16	2,933	x72	1R x4/2R x8
RDIMM	32	3,200	x72	2R x4
RDIMM	32	2,933	x72	2R x4
RDIMM	64	3,200	x72	2R x4
RDIMM	64	2,933	x72	2R x4

Type	Capacity (GB)	Frequency (MHz)	Data Width	Organization
RDIMM	128	2,933	x72	4R x4
BPS	128	3,200		

7.2.3 Drive Specifications

Table 7-4 SAS HDD Specifications

Model	Speed in rpm	Capacity	Max. Qty.
2.5-inch SAS HDD	10K	600 GB/1.2 TB/1.8 TB/2.4 TB	25
	15K	600 GB/900 GB	25

Table 7-5 SAS/SATA SSD Specifications

Model	Capacity	Max. Qty.
SATA SSD	240 GB	25
SATA SSD	480 GB	25
SATA SSD	960 GB	25
SATA SSD	1.92 TB	25
SATA SSD	3.84 TB	25
SAS SSD	960 GB	25
SAS SSD	1.92 TB	25
SAS SSD	3.84 TB	25

Table 7-6 U.2 NVMe SSD Specifications

Model	Capacity	Max. Qty.
U.2 NVMe SSD	960 GB	24
U.2 NVMe SSD	1 TB	24
U.2 NVMe SSD	1.6 TB	24
U.2 NVMe SSD	1.92 TB	24
U.2 NVMe SSD	2 TB	24
U.2 NVMe SSD	3.2 TB	24
U.2 NVMe SSD	3.84 TB	24
U.2 NVMe SSD	4 TB	24
U.2 NVMe SSD	6.4 TB	24
U.2 NVMe SSD	8 TB	24

Table 7-7 M.2 SSD Specifications

Model	Capacity	Max. Qty.
M.2 SATA SSD	240 GB	2
M.2 SATA SSD	480 GB	2
M.2 SATA SSD	960 GB	2
M.2 PCIe SSD	960 GB	2
M.2 PCIe SSD	1.92 TB	2
M.2 PCIe SSD	3.84 TB	2

7.2.4 SAS/RAID Controller Card Specifications

Table 7-8 SAS/RAID Controller Card Specifications

Type	Manufacturer	Model
SAS Controller Card	Inspur	PM8222_8
		PM8222_SmartHBA_8
		SAS3008+IR+PCIE 3.0
		SAS3008+IT+PCIE 3.0
		9400-8i_HDM12G
RAID Controller Card	Inspur	PM8204_RA_8_2GB
		PM8204_RA_8_4GB
	LSI	8R0_9460-8i_2GB
		8_9361-8i_2G
		9361-16i_2GB
		9460-16i_4GB
		9361-8i_1G
		9361-8i_2G
	SND	SND_2R0_9230_N_M.2

7.2.5 NIC Specifications

Table 7-9 OCP NIC Specifications

Type	Model	Speed (Gbps)	Port Qty.
OCP 3.0 Card	Andes-M6_X710_10G	10	2
	25G_MCX562A	25	2
	25G_E810XXVDA2	25	2
	E810_25G	25	2
	100G_MCX566ACDAB	100	2

Table 7-10 PCIe NIC Specifications

Type	Model	Speed (Gbps)	Port Qty.
PCIe NIC	I350-AM2	1	2
	W_I350-T2V2	1	2
	W_I350AM4_1G	1	4
	82599ES_10G	10	2
	W_82599ES	10	2
	INSPUR_XL710_10G	10	2
	10G_X710DA2	10	2
	10G_X550T2	10	2
	X550_10G	10	2
	25G_MCX4121A-ACAT	25	2
	25G_MCX512A-ACAT	25	2
	BROADCM_25G_57414	25	2
	Andes-M6_E810_25G	25	2
	40G_XL710_LC_PCIEx8_MM	40	1
	40G_XL710_LC_PCIEx8_2_MM	40	2
	M_100G_MCX516A-CCAT_LC_PCIEx16_2_XR	100	2
	M_100G_MCX516A-CDAT_LC_PCIEx16_2P_XR	100	2

7.2.6 HBA/HCA Card Specifications

Table 7-11 HBA Card Specifications

Type	Model
HBA Card	HBA_QL_4R1_QLE2690-ISR-BK_FC16G_PCIe
	HBA_QL_4R2_QLE2692-ISR-BK_FC16G_PCIe
	HBA_QL_8R1_QLE2740_FC32G_PCIe
	HBA_QL_8R2_QLE2742-ISR-BK_FC32G_PCIe
	HBA_E_8R0_LPE31000-M6_FC16G_PCIe
	HBA_E_8R2_LPE31002-M6_FC16G_PCIe
	HBA_E_8R2_LPE32002-AP_FC32G_PCIe
	HBA_E_0R1_LPE32000-AP_FC32G_PCIe

Table 7-12 HCA Card Specifications

Type	Model	Speed (Gbps)	Port Qty.
HCA Card	MCX653105A-ECAT PCIe 3.0/4.0 x16	100	1
	MCX653106A-ECAT PCIe 3.0/4.0 x16	100	2
	MCX555A-ECAT PCIe 3.0 x16	100	1

Type	Model	Speed (Gbps)	Port Qty.
	MCX556A-ECAT PCIe 3.0 x16	100	2
	MCX653105A-HDAT PCIe 3.0/4.0 x16	200	1
	MCX653106A-HDAT PCIe 3.0/4.0 x16	200	2
	HCA _I_1-EDR4X25_100HFA016LS_PCIe	200	1

7.2.7 GPU/Graphics Card Specifications

Table 7-13 GPU/Graphics Card Specifications

Type	Model	Max. Qty.
GPU	GPU_NV_32G_Tesla-V100S_4096b_P	2
	GPU_NV_16GB_Tesla-T4_256b_P	4
Graphics Card	Video_NV_2G_P620_128b_P_PG178	2

7.2.8 PSU Specifications

The NF8260M6 supports up to 2 hot-swap PSUs in 1+1 redundancy that follow the Intel Common Redundant Power Supply (CRPS) specification with standard electrical and structural design. The CRPS PSUs are 80 Plus Platinum or Titanium rated with various output powers, allowing customers to choose as needed. The PSUs will lock automatically after being inserted into the power bay, enabling tool-less maintenance.

● The following rated 110 VAC/230 VAC and 240 VDC PSUs in 1+1 redundancy are supported:

- 800 W Platinum PSU: 800 W (110 VAC), 800 W (230 VAC), 800 W (240 VDC for China)

- 1,300 W Platinum PSU: 1,000 W (110 VAC), 1,300 W (230 VAC), 1,300 W (240 VDC for China)

- 1,600 W Platinum PSU: 1,000 W (110 VAC), 1,600 W (230 VAC), 1,600 W (240 VDC for China)

- 2,000 W Platinum PSU: 1,000 W (110 VAC), 2,000 W (230 VAC), 2,000 W (240 VDC for China)

- 800 W Titanium PSU: 800 W (230 VAC), 800 W (240 VDC for China)

- 1,300 W Titanium PSU: 1,300 W (230 VAC), 1,300 W (240 VDC for China)

Note: At a rated input voltage of 110 VAC, the output power of a 1,300/1,600/2,000 W PSU will be derated to 1,000 W.

Operating voltage range:

- 110 - 230 VAC: 90 - 264 VAC

- 240 VDC: 180 - 320 VDC

● The following rated 336 VDC PSUs in 1+1 redundancy are supported:

- 800 W PSU: 800 W (336 VDC)

- 1,300 W PSU: 1,300 W (336 VDC)

Operating voltage range:

- 336 VDC: 260 - 400 VDC

● The following rated -48 VDC PSUs in 1+1 redundancy are supported:

- 800 W PSU: 800 W (-48 VDC)

- 1,300 W PSU: 1,300 W (-48 VDC)

Operating voltage range:

- -48 VDC: -40 to -72 VDC

8 Regulatory Information

8.1 Safety

8.1.1 General

- Strictly comply with local laws and regulations while installing the equipment. The safety instructions in this section are only a supplement to local safety regulations.

- To ensure personal safety and to prevent damage to the equipment, all personnel must strictly observe the safety instructions in this section and on the device labels.

- People performing specialized activities, such as electricians and electric forklift operators, must possess qualifications recognized by the local government or authorities.

8.1.2 Personal Safety

- Only personnel certified or authorized by Inspur are allowed to perform the installation procedures.

- Stop any operation that could cause personal injury or equipment damage. Report to the project manager and take effective protective measures.

- Working during thunderstorms, including but not limited to handling equipment, installing cabinets and installing power cords, is forbidden.

- Do not carry the weight over the maximum load per person allowed by local laws or regulations. Arrange appropriate installation personnel and do not overburden them.

- Installation personnel must wear clean work clothes, work gloves, safety helmets and safety shoes, as shown in Figure 8-1.

Figure 8-1 Protective Clothing

- Before touching the equipment, put on ESD clothes and ESD gloves or an ESD wrist strap, and remove any conductive objects such as wrist watches or metal jewelry, as shown in Figure 8-2, in order to avoid electric shock or burns.
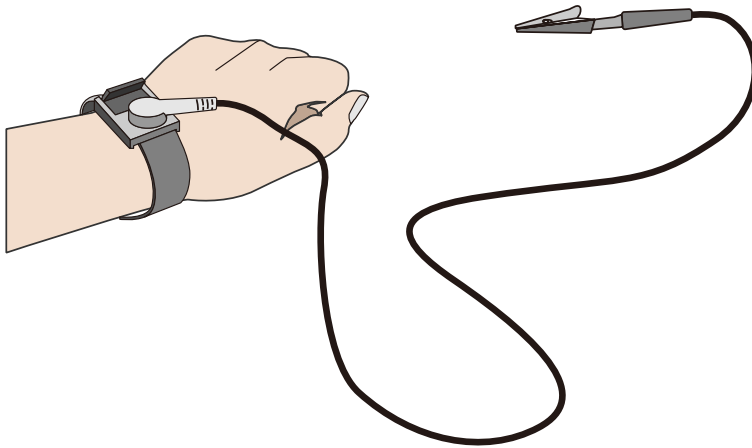
Figure 8-2 Removing Conductive Objects
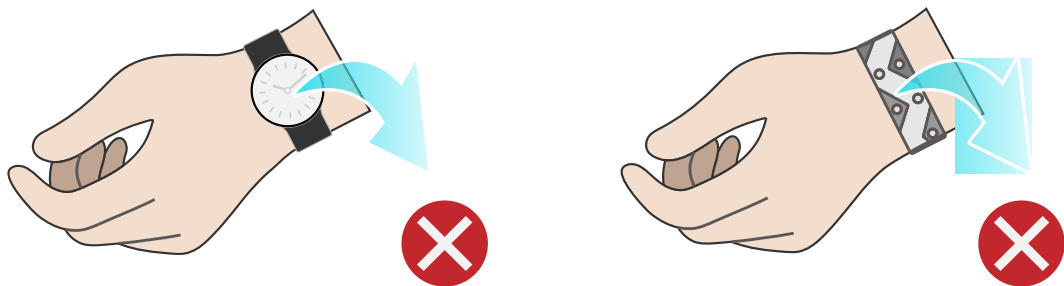
How to put on an ESD strap (Figure 8-3).

1. Put your hand through an ESD wrist strap.

2. Tighten the strap buckle to ensure a snug fit.

3. Plug the alligator clip of the ESD wrist strap into the corresponding jack on the grounded cabinet or grounded chassis.

Figure 8-3 Wearing an ESD Wrist Strap

- Use tools correctly to avoid personal injury.

- When moving or lifting equipment above shoulder height, use lifting devices and other tools as necessary to avoid personal injury or equipment damage due to equipment slippage.

- The power sources of the server carry a high voltage. Direct contact or indirect contact through damp objects with the high-voltage power source is fatal.

- To ensure personal safety, ground the server before connecting power.

- When using ladders, always have someone hold and guard the bottom of the ladders. In order to prevent injury, never use a ladder alone.

- When connecting, testing or replacing optical fiber cable, avoid looking into the optical port without eye protection in order to prevent eye damage from laser light.

8.1.3 Equipment Safety

- To ensure personal safety and prevent equipment damage, use only the power cords and cables that come with the server. Do not use them with any other equipment.

- Before touching the equipment, put on ESD clothing and ESD gloves to prevent static electricity from damaging the equipment.

- When moving the server, hold the bottom of the server. Do not hold the handles of any module installed in the server, such as PSUs, fan modules, drive modules, or motherboard. Handle the equipment with care at all times.

- Use tools correctly to avoid damage to the equipment.

- Connect the power cords of active and standby PSUs to different PDUs to ensure high system reliability.

- To ensure equipment safety, always ground the equipment before powering it on.

8.1.4 Transportation Precautions

Contact the manufacturer for precautions before transportation as improper transportation may damage the equipment. The precautions include but not limited to:

- Hire a trusted logistics company to move all equipment. The transportation process must comply with international transportation standards for electronic equipment. Always keep the equipment being transported upright. Avoid collision, moisture, corrosion, packaging damage or contamination.

- Transport the equipment in its original packaging.

- If the original packaging is unavailable, separately package heavy and bulky components (such as chassis, blade servers and blade switches), and fragile components (such as optical modules and PCIe cards).

- Power off all equipment before shipping.

8.1.5 Manual Handling Weight Limits

⚠️ CAUTION

Observe local laws or regulations regarding the manual handling weight limits per person. The limits shown on the equipment and in the document are recommendations only.

Table 8-1 lists the manual handling weight limits per person specified by some organizations.

Table 8-1 Manual Handling Weight Limits per Person

Organization	Weight Limit (kg/lbs)
European Committee for Standardization (CEN)	25/55.13
International Organization for Standardization (ISO)	25/55.13
National Institute for Occupational Safety and Health (NIOSH)	23/50.72
Health and Safety Executive (HSE)	25/55.13
General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China (AQSIQ)	• Male: 15/33.08 • Female: 10/22.05

8.2 Warranty

For information about warranty policies, refer to Chapter 9 Inspur Limited Warranty in *Inspur Server NF8260M6 User Manual*.

9 System Management

9.1 Intelligent Management System ISBMC

ISBMC, an Inspur self-developed remote server management system, supports mainstream management specifications in the industry such as IPMI 2.0 and Redfish 1.8. ISBMC features high operational reliability, easy serviceability for different business scenarios, accurate and comprehensive fault diagnosis capabilities, and industry-leading security reinforcement capabilities.

ISBMC supports:

- IPMI 2.0

- Redfish 1.8

- SNMP v1/v2c/v3

- HTML5/Java remote consoles (Keyboard, Video, Mouse)

- Remote virtual media

- Login via web browsers

- Intelligent fault diagnosis

Table 9-1 ISBMC Features

Feature	Description
Management Interface	Supports extensive remote management interfaces for various server O&M scenarios. The supported interfaces include: • IPMI • SSH CLI • SNMP • HTTPS • Web GUI • Redfish • RESTful • DCMI • Syslog

Feature	Description
Accurate and Intelligent Fault Location	IDL, a self-developed fault diagnosis system, offers accurate and comprehensive hardware fault location capabilities, and outputs detailed fault causes and handling suggestions.
Alert Management	Supports rich automatic remote alert capabilities, including proactive alerting mechanisms such as SNMP Trap (v1/v2c/v3), email alerts and syslog remote alerts to ensure 24 × 7 reliability.
Remote Console KVM	Supports HTML5- and Java-based remote console to remotely control and operate the monitor/mouse/ keyboard of the server, providing highly available remote management capabilities without on-site operation.
Virtual Network Console (VNC)	Supports mainstream third-party VNC clients without relying on Java, improving management flexibility.
Remote Virtual Media	Supports virtualizing images, USB devices, folders and local media devices as media devices of remote servers, simplifying OS installation, file sharing, and other O&M tasks.
Web GUI	Supports the visual management interface developed by Inspur, displaying abundant information of the server and components, and offers easy-to-use Web GUIs.
Crash Screenshot and Manual Screenshot	Supports automatic crash screenshot with the last screen before crash saved, and provides manual screenshot, which can quickly capture the screen for easy inspection at scheduled time.
Dual-Flash and Dual-Image	Supports dual flash and dual image, enabling automatic flash failover in case of software faults or flash damage, improving operational reliability.
Power Capping	Supports power capping, increasing deployment density and reducing energy consumption.
IPv4/IPv6	Supports both IPv4 and IPv6, enhancing network deployment flexibility.
Auto-Switching of Management Network Port	Supports auto-switching between the dedicated management network port and shared management network port, providing customers with flexible network deployment solutions for different management network deployment scenarios.
ISBMC Self-Diagnosis and Self-Recovery System	• Supports the reliable dual watchdog mechanism for hardware and software, enabling automatic restoration of BMC in case of BMC abnormality.

Feature	Description
	• Provides a thermal protection mechanism, which is automatically triggered when the BMC is abnormal to ensure that the fan operates at safe speeds to avoid system overheating. • Supports self-diagnosis of processors, memory modules, and storage devices of ISBMC, and automatically cleans the workload to restore to normal when the device usage rate is too high.
Power Supply Control	Supports virtual power buttons for startup, shutdown, restart, and restart after shutdown
UID LED and Remote Control LED	Supports remote lighting of the UID LED for locating the server in the server room, and supports remote control LED. The UID LED flashes when a user remotely logs in via web, KVM, or SSH to inform the on-site personnel that an administrator is accessing the server.
Secure Firmware Update	Supports firmware update based on secure digital signatures, mismatch prevention mechanism for firmware from different manufacturers and firmware for different server models, and firmware update of BMC/BIOS/CPLD/ PSU.
Serial Port Redirection	Supports remote redirection of the system serial port, BMC serial port, and other serial ports, and directs the server-side serial port output to the local administrator via the network for server debugging.
Storage Information Display	Displays RAID logical array information and drive information, supports remote RAID creation for improved deployment efficiency.
User Role Management	Supports user detail management based on user roles and flexible creation of user roles with different privileges, and provides more user roles to allow administrators to grant different privileges to O&M personnel.
Security Feature	Adopts the industry-leading Inspur server security baseline standard V2.0. SSH, HTTPS, SNMP and IPMI use secure and reliable algorithms. ISBMC offers capabilities including secure update and boot and security reinforcement mechanisms such as anti-replay, anti-injection, and anti-brute force.

9.2 Inspur Physical Infrastructure Manager (ISPIM)

The NF8260M6 server is compatible with the latest version of Inspur Physical Infrastructure Manager (ISPIM).

The independently developed ISPIM for data centers features asset management, monitoring, inspection, energy consumption management and stateless management. It also provides interfaces such as Restful and SNMP for easy integration and interfacing. ISPIM has the following key features:

- Lightweight deployment in multiple scenarios and full lifecycle management of devices

- High reliability and on-demand node scalability enabled by 1 to N data collectors

- Intelligent asset management and real-time tracking of asset changes

- Comprehensive monitoring and automatic fault diagnosis

- Batch configuration, deployment and update, shortening the deployment time

- Intelligent analysis and control of power consumption, helping save energy and improving operational stability of data centers

- Improved version management efficiency

- Standardized northbound interfaces for easy integration and interfacing

- Centralized management of edge devices

Table 9-2 ISPIM Features

Feature	Description
Centralized Device Management	Supports centralized management of network-wide devices, including servers (the full range of Inspur server family, including general-purpose rack servers, AI servers, blade servers, all-in-one servers and other high-end server products, and third-party servers), storage devices (Inspur general-purpose disk arrays, distributed storage devices, and storage devices of other manufacturers), and network devices (Inspur switches, third-party switches, and third-party firewall devices).
Monitoring	Supports centralized display, search, blocking and email notifications of device alerts, creation of alert rules, notification rules and blocking rules, alert severity level setting, alert forwarding and southbound settings, device performance monitoring, and distributed monitoring.

Feature	Description
Stateless Computing	Supports BMC/BIOS update and configuration of Inspur servers, RAID configuration of Inspur servers, firmware configuration templates, automatic firmware baseline management and the repository for update files.
OS Deployment	Supports batch deployment of OSs via BMC interfaces, one-click deployment with automatic and detailed logging and with no manual intervention needed, and concurrent deployment of up to 40 devices.
Asset Management	Supports part-level asset management, multi-dimensional asset report, 3D data centers and asset maintenance management.
Inspection	Supports active inspection, alert-triggered passive inspection, intelligent fault diagnosis and analysis, and call home.
Power Consumption Management	Supports multi-dimensional report of power consumption, intelligent power capping strategies and intelligent power consumption prediction; provides a variety of power consumption optimization analyses, including cooling analysis, server utilization analysis, server power consumption analysis, and load distribution analysis.
Security Management	Implements security control of ISPIM via a set of security policies such as user management, role management, authentication management (local authentication and LDAP authentication) and certificate management.

9.3 Inspur Server Intelligent Boot (ISIB)

The NF8260M6 server is compatible with the latest version of Inspur Server Intelligent Boot (ISIB) system, a self-developed automatic O&M management system throughout the server lifecycle. Based on the SSH and PXE technologies, it is compatible with the full range of Inspur servers, and offers more efficient and reliable automatic deployment and software and hardware configuration management. ISIB has the following key features:

- Full lifecycle management from deployment to automatic O&M

- One-stop and one-click deployment for bare metal servers

- Flexible task scheduling with O&M capabilities in multiple scenarios

- Large-scale deployment of technical architecture, shortening the deployment time

- Zero network deployment with plug-and-play support

- Accurate logging and instruction-level tracing of execution results

- Rich built-in O&M scripts and management schemes

Table 9-3 ISIB Features

Feature	Description
Home	Provides multi-dimensional report of assets, repositories, operations and jobs, displays jobs 24 hours dynamically and column bars of jobs in the last 30 days.
Asset	Supports automatic device discovery, OS information collection, and out-of-band/in-band power supply management.
Repository	Enables you to manage images, software, firmware, configuration files, scripts and sources for easy OS deployment and firmware update.
Operation	• Firmware update • Hardware configuration • Automatic OS installation via PXE • Installation template management • Image cloning and restoration • Software distribution • Configuration changes • System inspection
Task	• Supports job scheduling, and scheduled and periodic task execution. • Provides visual multi-dimensional task display and detailed logging.
GShell	Remote management of a single SSH terminal or multiple SSH terminals
DFX	• Supports high availability (HA) and secure access via HTTPS. • Supports system snapshots and self-service management. • Supports batch O&M at a scale of 10,000 devices. • Provides the northbound RESTful interfaces.

10 Certifications

Table 10-1 Certifications

Country/Region	Certification	Mandatory/Voluntary
China	CCC	Mandatory
	China Environmental Labelling	Voluntary
	CECP	Voluntary
International Mutual Recognition	CB	Voluntary
EU	CE	Mandatory
US	FCC	Mandatory
	UL	Voluntary
	Energy Star	Voluntary
Russia	EAC	Mandatory
	FSS	Mandatory
South Korea	E-Standby	Mandatory
	KC	Mandatory

11 Appendix A

11.1 Operating Temperature Specification Limits

Table 11-1 Operating Temperature Specification Limits

Configuration	Max. Operating Temperature: 30°C (86°F)	Max. Operating Temperature: 35°C (95°F)	Max. Operating Temperature: 40°C (104°F)	Max. Operating Temperature: 45°C (113°F)
General Configuration – 8 × 2.5-inch NVMe/SAS/SATA Drive	• 6038 fan • RDIMM/LRDIMM (≤48 pcs) • CPU TDP ≤165 W • 8 × PCIe card • GPUs not supported	• 6038 fan • RDIMM/LRDIMM (≤48 pcs) • CPU TDP ≤165 W • 8 × PCIe card • GPUs not supported	Not supported	Not supported
High-End CPU Configuration – 8 × 2.5-inch NVMe/SAS/SATA Drive	• 6056 fan • RDIMM/LRDIMM (≤48 pcs) or 24 × BPS + 24 × RDIMM/LRDIMM • CPU TDP ≤250 W • 12 × PCIe card • GPUs not supported	• 6056 fan • RDIMM/LRDIMM (≤48 pcs) or 24 × BPS + 24 × RDIMM/LRDIMM • CPU TDP ≤250 W • 12 × PCIe card • GPUs not supported	Not supported	Not supported
25-Drive Storage	• 6056 fan	• 6056 fan	Not supported	Not supported

Configuration	Max. Operating Temperature: 30℃ (86℉)	Max. Operating Temperature: 35℃ (95℉)	Max. Operating Temperature: 40℃ (104℉)	Max. Operating Temperature: 45℃ (113℉)
Configuration – 25 × 2.5-inch SAS/SATA Drive	• RDIMM/LRDIMM (≤48 pcs) • CPU TDP ≤205 W (excluding 8356H) • 8 × PCIe card • GPUs not supported • 100 GbE OCP NIC card not supported	• RDIMM/LRDIMM (≤48 pcs) • CPU TDP ≤205 W (excluding 8356H) • 8 × PCIe card • GPUs not supported • 100 GbE OCP NIC card not supported		
24-Drive Storage Configuration – 24 × 2.5-inch NVMe/SAS/SATA Drive	• 6056 fan • RDIMM/LRDIMM (≤48 pcs) • CPU TDP ≤205 W (excluding 8356H) • 12 × PCIe card (CPU TDP ≤205 W when configured with 100 GbE NICs) • GPUs not supported • 100 GbE OCP NIC card not supported	• 6056 fan • RDIMM/LRDIMM (≤48 pcs) • CPU TDP ≤205 W (excluding 8356H) • 12 × PCIe card (CPU TDP ≤205 W when configured with 100 GbE NICs) • GPUs not supported • 100 GbE OCP NIC card not supported	Not supported	Not supported
GPU Configuration	• 6056 fan	Not supported	Not supported	Not supported

Configuration	Max. Operating Temperature: 30°C (86°F)	Max. Operating Temperature: 35°C (95°F)	Max. Operating Temperature: 40°C (104°F)	Max. Operating Temperature: 45°C (113°F)
1 – 8 × 2.5-inch NVMe/SAS/SATA Drive	• RDIMM/LRDIMM (≤48 pcs) • CPU TDP ≤165 W • 6 × PCIe card • 100 GbE OCP NIC card not supported • 2 × dual-slot GPU			
GPU Configuration 2 – 8 × 2.5-inch NVMe/SAS/SATA Drive	• 6056 fan • RDIMM/LRDIMM (≤48 pcs) • CPU TDP ≤165 W • 6 × PCIe card • 100 GbE OCP NIC card not supported • 4 × single-slot GPU	Not supported	Not supported	Not supported
Extreme Temperature Configuration 1 – 8 × 2.5-inch NVMe/SAS/SATA Drive	• 6056 fan • RDIMM/LRDIMM (≤48 pcs) • CPU TDP ≤150 W • 8 × PCIe card • OCP NIC card not supported	• 6056 fan • RDIMM/LRDIMM (≤48 pcs) • CPU TDP ≤150 W • 8 × PCIe card • OCP NIC card not supported	• 6056 fan • RDIMM/LRDIMM (≤48 pcs) • CPU TDP ≤150 W • 8 × PCIe card	Not supported

Configuration	Max. Operating Temperature: 30°C (86°F)	Max. Operating Temperature: 35°C (95°F)	Max. Operating Temperature: 40°C (104°F)	Max. Operating Temperature: 45°C (113°F)
	• GPUs not supported	• GPUs not supported	• OCP NIC card not supported • GPUs not supported	
Extreme Temperature Configuration 2 – 8 × 2.5-inch NVMe/SAS/SATA Drive	• 6056 fan • RDIMM/LRDIMM (≤12 pcs) • CPU TDP ≤150 W • 6 × PCIe card • OCP NIC card not supported • GPUs not supported	• 6056 fan • RDIMM/LRDIMM (≤12 pcs) • CPU TDP ≤150 W • 6 × PCIe card • OCP NIC card not supported • GPUs not supported	• 6056 fan • RDIMM/LRDIMM (≤12 pcs) • CPU TDP ≤150 W • 6 × PCIe card • OCP NIC card not supported • GPUs not supported	• 6056 fan • RDIMM/LRDIMM (≤12 pcs) • CPU TDP ≤150 W • 6 × PCIe card • OCP NIC card not supported • GPUs not supported

▤ NOTE

- The maximum operating temperature is 5°C (9°F) lower than the rated value if a single fan fails.
- Single fan failure may affect system performance.
- When using the front bezel with the 100 GbE OCP NIC card, 8356 CPUs, GPUs or all front drives (24-drive/25-drive configuration) installed, the maximum operating temperature is 3°C (5.4°F) lower than the rated value.

11.2 Model

Table 11-2 Model

Certified Model	Description
NF8260M6	Global

11.3 RAS Features

The NF8260M6 supports a variety of RAS (Reliability, Availability, and Serviceability) features. By configuring these features, the NF8260M6 can provide greater reliability, availability, and serviceability.

11.4 Sensor List

Table 11-3 Sensor List

Sensor	Description	Sensor Location
Inlet_Temp	Air inlet temperature	Right mounting ear
PCH_Temp	PCH temperature	Motherboard
CPUN_Temp	CPUn core temperature	CPUn n indicates the CPU number with a value of 0 - 3
CPUN_DTS	CPUn DTS value	CPUn n indicates the CPU number with a value of 0 - 3
CPUN_DIMM_T	CPUn DIMM temperature	DIMM (CPUn) n indicates the CPU number with a value of 0 - 3
PSUN_Temp	PSUn temperature	PSUn n indicates the PSU number with a value of 0 - 1
HDD_MAX_Temp	The maximum temperature among all drives	Drives attached to drive backplane
OCP_NIC_Temp	OCP NIC temperature	OCP NIC
PCIe_NIC_Temp	PCIe NIC temperature	PCIe NIC
RAID_Temp	The maximum temperature among all RAID controller cards	PCIe RAID controller cards
GPU_Temp	The maximum temperature among all GPUs	PCIe GPUs

Sensor	Description	Sensor Location
NVMe_M.2_Temp	The maximum temperature among all M.2 drives	M.2 riser card
SYS_12V	12 V voltage supplied by motherboard to CPU	Motherboard
SYS_5V	5 V voltage supplied by motherboard to BMC	Motherboard
SYS_3V3	3.3 V voltage supplied by motherboard to BMC	Motherboard
CPUN_DDR_VDDQ1	1.2 V DIMM voltage	Motherboard n indicates the CPU number with a value of 0 - 3
CPUN_DDR_VDDQ2	1.2 V DIMM voltage	Motherboard n indicates the CPU number with a value of 0 - 3
CPUN_Vcore	CPUn Vcore voltage	Motherboard N indicates the CPU number with a value of 0 - 3
PSUN_VIN	PSUn input voltage	Motherboard n indicates the PSU number with a value of 0 - 1
PSUN_VOUT	PSUn output voltage	Motherboard n indicates the PSU number with a value of 0 - 1
RTC_Battery	RTC battery voltage	RTC battery on motherboard
FANN_Speed FANN_F_Speed FANN_R_Speed	FANn speed	FANn n indicates the fan module number with a value of 0 - 5
Total_Power	Total input power	PSUs
PSUN_PIN	PSUn input power	PSUn n indicates the PSU number with a value of 0 - 1
PSUN_POUT	PSUn output power	PSUn n indicates the PSU number with a value of 0 - 1
FAN_Power	Total fan power	Fans
CPU_Power	Total CPU power	Motherboard
Memory_Power	Total memory power	Motherboard
Disk_Power	Total drive power	Motherboard
CPUN_Status	CPUn status	CPUn n indicates the CPU number with a value of 0 - 3

Sensor	Description	Sensor Location
CPU_Config	CPU configuration status	CPUs
CPUN_MEM_Hot	CPUn DIMM overtemperature	CPUn n indicates the CPU number with a value of 0 - 3
CPUN_CXDY	CPUn DIMM status	The corresponding DIMM for CPUn • n indicates the CPU number with a value of 0 - 3 • x indicates the memory channel number under the CPU with a value of 0 - 5 • y indicates the DIMM number with a value of 0 - 1
FANN_Status	FANn failure status	FANn n indicates the fan number with a value of 0 - 5
FAN_Redundant	Fan redundancy lost alert status	Fans
PCIe_Status	PCIe card status error	PCIe card
Power_Button	Power button pressed	Motherboard
Watchdog2	Watchdog	Motherboard
Sys_Health	BMC health status	BMC chip
UID_Button	UID button status	Motherboard
PWR_Drop	Voltage drop status	Motherboard
PWR_On_TMOUT	Power-on timeout	Motherboard
PWR_CAP_Fail	Power capping status	Motherboard
BP_F_Disk_Stat	Front drive backplane status	Drive backplane
PSU_Redundant	PSU redundancy lost alert status	PSUs
PSU_Mismatch	PSU model mismatch	PSUs
PSUN_Status	PSUn failure status	PSUn n indicates the PSU number with a value of 0 - 1
Intrusion	Chassis-opening activity	Motherboard
SysShutdown	Reason for system shutdown	/

Sensor	Description	Sensor Location
ACPI_PWR	ACPI status	
ME_FW_Status	ME status	
SysRestart	Reason for system restart	
BIOS_Boot_Up	BIOS boot up complete	
System_Error	Emergency system failure	
POST_Status	POST status	
BMC_Boot_Up	Record the BMC boot event	
SEL_Status	Record the event that system event logs are almost full/cleared	/
BMC_Status	BMC status	/

12 Appendix B Acronyms and Abbreviations

A

AC	Alternating Current
ACPI	Advanced Configuration and Power Interface
AD	App Direct
AI	Artificial Intelligence
ANSI	American National Standards Institute
AQSIQ	General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China
AVX	Advanced Vector Extensions

B

BIOS	Basic Input Output System
BLE	BIOS Lock Enable
BMC	Baseboard Management Controller
BPS	Barlow Pass

C

CAS	Column Address Strobe
CB	Certification Body
CCC	China Compulsory Certificate
CE	Conformitè Europëenne
CEN	European Committee for Standardization (CEN)

CECP	China Energy Conservation Program
CLI	Command-Line Interface
CMOS	Complementary Metal-Oxide-Semiconductor
CPLD	Complex Programmable Logic Device
CPU	Central Processing Unit
CRPS	Common Redundant Power Supply
CSP	Cloud Service Provider

D

DC	Direct Current
DCMI	Data Center Manageability Interface
DDR4	Double Data Rate 4
DIMM	Dual In-line Memory Module
DPC	DIMM Per Channel
DRAM	Dynamic Random Access Memory
DTS	Digital Thermal Sensor
DWPD	Drive Writes Per Day

E

EAC	Eurasian Conformity
ECC	Error-Correcting Code
ESD	Electrostatic Discharge

F

FCC	Federal Communications Commission
FHHL	Full-Height Half-Length

FSS	Federal Security Service
FW	Firmware

G

GbE	Gigabit Ethernet
GPU	Graphics Processing Unit
GUI	Graphical User Interface

H

HBA	Host Bus Adapter
HCA	Host Channel Adapter
HDD	Hard Disk Drive
HHHL	Half-Height Half-Length
HSE	Health and Safety Executive
HTML	Hyper Text Markup Language
HTTPS	Hypertext Transfer Protocol Secure

I

I/O	Input/Output
IDL	Inspur Diagnosis Log
IEC	International Electrotechnical Commission
IMC	Integrated Memory Controller
IP	Internet Protocol
IPMI	Intelligent Platform Management Interface
IPv4	Internet Protocol version 4
IPv6	Internet Protocol version 6

ISBMC	Inspur Server Baseboard Management Controller
ISIB	Inspur Server Intelligent Boot
ISO	International Organization for Standardization
ISPIM	Inspur Physical Infrastructure Manager
ISQP	Inspur Server Quick Provisioning

J

JTAG	Joint Test Action Group

K

KC	Korea Certification
KVM	Keyboard Video Mouse

L

LCD	Liquid Crystal Display
LED	Light Emitting Diode
LDAP	Lightweight Directory Access Protocol
LRDIMM	Load-Reduced Dual In-line Memory Module

M

ME	Management Engine

N

NC-SI	Network Controller Sideband Interface
NIC	Network Interface Card

NIOSH	National Institute for Occupational Safety and Health
NVMe	Non-Volatile Memory Express

O

OCP	Open Compute Project
OS	Operating System

P

PCH	Platform Controller Hub
PCIe	Peripheral Component Interconnect Express
PDU	Power Distribution Unit
PFR	Platform Firmware Resilience
PID	Proportional-Integral-Derivative
PMem	Persistent Memory
POST	Power-On Self-Test
PSU	Power Supply Unit
PXE	Pre-boot Execution Environment

R

RAID	Redundant Arrays of Independent Disks
RAS	Reliability Availability Serviceability
RDIMM	Registered Dual In-line Memory Module
RH	Relative Humidity
RHEL	Red Hat Enterprise Linux
RST	Reset
RTC	Real Time Clock

S

SAP HANA	SAP (System Analysis Program Development) High-Performance Analytic Appliance
SAS	Serial Attached SCSI
SATA	Serial Advanced Technology Attachment
SCSI	Small Computer System Interface
SEL	System Event Log
SLES	SUSE Linux Enterprise Server
SN	Serial Number
SNMP	Simple Network Management Protocol
SSD	Solid State Drive
SSH	Secure Shell
Syslog	System Log

T

TCM	Trusted Cryptography Module
TCO	Total Cost of Ownership
TDP	Thermal Design Power
TF	TransFlash
TPCM	Trusted Platform Control Module
TPM	Trusted Platform Module
TSP	Telecommunication Service Provider

U

UEFI	Unified Extensible Firmware Interface
UID	Unit Identification
UL	Underwriters Laboratories

UPI	Ultra Path Interconnect
USB	Universal Serial Bus

V

VCCI	Voluntary Control Council for Interference
VGA	Video Graphics Array
VLAN	Virtual Local Area Network
VMD	Volume Management Device
VNC	Virtual Network Console
VNNI	Vector Neural Network Instructions
VPP	Virtual Pin Port
VRD	Voltage Regulator-Down
VROC	Virtual RAID on CPU

X

XDP	eXtend Debug Port