1 Hardware Installation and Usage Precautions

Following All Safety Precautions

- To ensure human and device security, comply with all the safety precautions marked on the device and instructed in this document before any operation. The CAUTION, WARNING, and NOTE items in this document do not cover all the safety precautions that must be obeyed. They are supplements to the safety precautions.

- When operating Huawei products and equipment, comply with safety precautions and special safety instructions relevant to the corresponding equipment provided by Huawei. The safety precautions in this document are only some that Huawei can predict. Huawei is not liable for any consequence that results from violation of universal regulations for safety operations and safety codes on design, production, and equipment use.

Complying with Local Rules and Regulations

When operating a device, comply with local laws and regulations.

Installation Personnel Requirement

Installation and maintenance personnel must be trained to perform operations correctly and safely.

Chassis

- If a CloudEngine 16800 chassis is not fully loaded with cards or power modules, cover vacant slots with filler panels to ensure efficient heat dissipation and EMC compliance.

- If the device is installed in a 600 mm wide cabinet or rack, do not install a PDU directly facing the device. Otherwise, the installation and removal of fan modules are affected. When installing a PDU, ensure that the PDU and the device are installed at different heights in the cabinet or rack.

Power Module

- A power module will enter the protection state upon input overvoltage, undervoltage, overtemperature, or output overcurrent. Note that when a power module enters the overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically resume power supply when the temperature falls within the normal range. After a power module enters the protection state, the module will report a corresponding protection state alarm to the MPU and cannot properly supply power to the device. Note that a faulty fan module will also report fault information to the MPU. If the power module cannot automatically resume power supply after the triggering condition of the protection state is removed, remove the power module from the chassis and reinstall it at least 30s later. The power module then can work properly.

Card

- Before installing cards on a device, make sure that the device and cards are all free from damp.

- When installing a card, gently push the card along the guide rails, and be careful not to crash the card connector. Distorted card connector will cause pins on the corresponding card connector or backplane connector to bend. If the connector of a card has collided with the slot or other objects, ask Huawei professionals whether the card can still be installed. Installing a card with distorted connector may cause damage to the device.

- **Install two MPUs of the same type into the active and standby MPU slots on a device. For details about the MPU types supported by this version, see "MPU" in Cards in the *Hardware Description*.**

- **The LPUs are available in G, GK, A, P and SAN series, the SFUs are available in G, GK, A and P series. V200 version supports G, GK and A series LPUs, as well as G, GK and A series SFUs. It does not support P and SAN series LPUs or P series SFUs. For details about the mapping between LPUs and SFUs, the mapping between MPUs and LPUs/SFUs, and the mapping between SFUs and fan modules, see "Card Classification" in Card Introduction > Cards in the *Hardware Description*.**

- Some cards are attached with labels of different colors near the ejector levers to identify their types. The color of labels on SFUs and LPUs to be installed on one device must be the same. Otherwise, the card will be damaged.

Card type	LPUs	SFUs
Card type 1	No label	No label
Card type 2	Red label	Red label
Card type 3	Blue label	Blue label

- The reset button on an MPU is used to manually reset the MPU. Exercise caution when using this button.
  - If the device has only one MPU, pressing this button will cause the device to restart.

- If the device has two MPUs:

    - Pressing the reset button on the active MPU will trigger an active/standby switchover.

    - Pressing the reset button on the standby MPU will reset the standby MPU, which does not affect running of the system.

- To remove a Switch Fabric Unit (SFU), hold down the OFL button for 6s. You can remove the SFU until the OFL indicator is steady yellow.

Cable

- To protect personal safety, do not install power cables while the power is on. Before connecting power cables, make sure that the power switches of the external power supply system and the device are all in OFF position.

- Each device must have at least two independent power inputs for power redundancy. Do not connect all the AC power cables of a device to the PDUs controlled by the same circuit breaker.

- Before connecting signal cables, take ESD protection measures, for example, wear ESD gloves or an ESD wrist strap.

- Before connecting Ethernet cables, use an Ethernet cable tester to test cable connectivity.

- Both ends of an idle high-speed cable must be covered by an ESD cap.

- The bend radius of high-speed cables must be larger than the minimum bend radius. Overbending high-speed cables may damage wires in the cables.

- Laser beams will cause eye damage. Do not look into bores of optical modules or optical fibers without eye protection.

- Cover idle optical ports and optical modules with dust plugs and cover idle optical fibers with dust caps.

- Optical fibers routed into a cabinet must be protected by a corrugated pipe. The bend radius of an optical fiber must be at least 20 times larger than its diameter. Generally, the bend radius of optical fibers should be no less than 40 mm.

- Bundle optical fibers with binding tape. Apply appropriate force to ensure that the optical fibers in a bundle can be moved easily.

- Fiber connectors must be tidy and clean to ensure normal communication. If a fiber connector is contaminated, clean it using a piece of fiber cleaning fabric.

- Both ends of an idle active optical cable (AOC) must be covered by an ESD cap.

- The bend radius of AOC cables must be no less than 30 mm. Overbending AOC cables may damage wires in the cables.

- Use the JG2 90° right angle terminals delivered with the device. To avoid short circuits and poor cable connections, do not make JG2 90° right angle terminals by yourself.

Optical Module

- CloudEngine 16800 series devices must use optical modules that are certified for Huawei data center switches. Optical modules that are not certified for

Huawei data center switches cannot ensure transmission reliability and may affect service stability. Huawei is not liable for any problems caused by the use of optical modules that are not certified for Huawei data center switches.

- The transmit power of a long-distance optical module is often larger than its overload power. Therefore, when using such optical modules, select optical fibers of an appropriate length to ensure that the actual receive power is smaller than the overload power. If the optical fibers connected to a long-distance optical module are too short, use an optical attenuator to reduce the receive power on the remote optical module. Otherwise, the remote optical module may be burnt.