



HUAWEI CloudEngine Series Switch User Guide

[Home](#) » [Huawei](#) » HUAWEI CloudEngine Series Switch User Guide 



HUAWEI

Quick Start Guide

CloudEngine 8800, 7800, 6800 and 5800 Series Switches

Issue: 23 (2020-06-17)

Part Number: 31505402



31505402

HUAWEI TECHNOLOGIES CO., LTD

Contents

- 1 About This Guide
- 2 Packing List
- 3 Safety Guidelines
- 4 Site Environment
- 5 Installing the Chassis
- 6 Installing Power Modules and Fan Modules
- 7 Installing a Card into the Chassis
- 8 Connecting Cables
- 9 Logging In to the Switch
- 10 Obtaining Product Documentation and Technical Support
- 11 Importer Information
- 12 Open Source Software Notice
- 13 Trademarks and Permissions
- 14 Documents / Resources
 - 14.1 References
- 15 Related Posts

About This Guide

Thank you for purchasing a Huawei CloudEngine series switch. This guide describes how to install CloudEngine 8800&7800&6800&5800 (CE8800&7800&6800&5800 for short) series switches. It also explains how to log in to your switch for the first time.

- CE5850-48T4S2Q-EI is used as an example to illustrate how to install the CE8850-32CQ-EI and CE7800&6800&5800 series switches. CE8860 is used as an example to illustrate how to install the CE8860, CE8861, CE8868 and CE8850-64CQ-EI switches. The methods for connecting and logging in to the CE8800&7800&6800&5800 series switches are similar. CE5850-48T4S2Q-EI is used as an example here.
- Figures in the document are for reference only and may be different from actual devices.
- Any procedural differences between models are specified at the start of each section.
- CE6880EI series switches are sold only in specified industries currently. For details about sales strategies, contact the equipment supplier.

For more information, see the **Hardware Installation and Maintenance Guide** for your switch on the Huawei support website.

Packing List

- Chassis (with the product model on the nameplate)
If the switch you ordered has built-in power modules and fan modules, the power modules and fan modules are installed in the chassis before the delivery by default.
- Installation accessory package:
 - Chassis ground cable
 - Console cable (only for CE8860, CE8861, CE8868)
 - Quick Start Guide
 - Warranty Card
 - Mounting brackets and guide rails
 - Floating nuts

- M4 screws
- M6 screws



NOTE

The numbers and types of items in the installation accessory package differ for different product models.

Safety Guidelines

- To ensure personal and equipment safety, observe all the safety precautions on the equipment and in this document. WARNING and CAUTION items do not cover all the safety precautions and are only supplementary to the safety precautions.
- Follow all the safety precautions and instructions provided by Huawei. The safety precautions outlined in this document are only requirements of Huawei and do not include general safety requirements. Huawei is not liable for any consequence that results from violation of regulations pertaining to safe operations or safety codes pertaining to design, production, and equipment use.



WARNING

- Laser beams will cause eye damage. Do not look into bores of optical modules or optical fibers without eye protection.
- Do not install power cables while the power is on.
- Do not turn on the power until you have finished installing the chassis and connecting cables.



CAUTION

- This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.
- Take ESD protection measures during equipment installation and maintenance. For example, wear ESD gloves or an ESD wrist strap.
- Do not place other objects on the chassis.

Site Environment

- Do not place this product in an environment with flammable or explosive gases, or smoke.
- The installation site must be free from leaking or dripping water, heavy dew, and humidity. If the relative humidity is high, use dehumidifiers or dehumidifying air conditioners.
- The installation site must be well ventilated. Ensure that air vents on the equipment are not blocked.
- Leave at least 50 mm clearance at the rear and both sides of the chassis for heat dissipation.
- Ensure that the temperature and humidity at the installation site meet the switch operation requirements. For the specific requirements, see the for your switch on the Huawei support website. Hardware Description

Installing the Chassis

5.1 Chassis Dimensions

Series	Dimensions (W x D x H)
CE8800	CE8860, CE8861, CE8868, CE8850-64CQ-EI: 442.0 mm × 600.0 mm × 88.1 mm (about 2U) CE 8850-32CQ-EI: 442.0 mm × 420.0 mm × 43.6 mm (about 1U)
CE7800	442.0 mm × 607.0 mm × 43.6 mm (about 1U)
CE6800	CE6810-32T16S4Q-LI, CE6851-48S6Q-HI, CE6855-48S6Q-HI, CE6856-48S6Q-HI, CE6857-48S6CQ-EI, CE6860, CE6865, CE6870, CE6880, CE6881, CE6820, CE6863: 442.0 mm × 420.0 mm × 43.6 mm (about 1U) Other CE6800 models: 442.0 mm × 600.0 mm × 43.6 mm (about 1U)
CE5800	442.0 mm × 420.0 mm × 43.6 mm (about 1U)

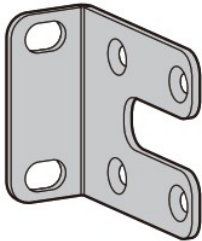
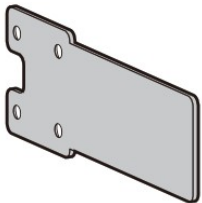
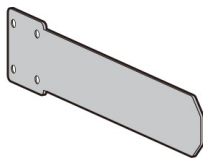
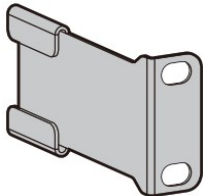
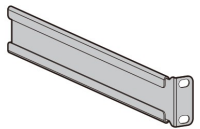
5.2 Requirements for the Cabinet

- The widths of CE8800, CE7800, CE6800, and CE5800 series switches comply with industry standards. Therefore, these switches can be installed in a standard 19-inch cabinet/rack complying with IEC297.
- The CE5800, CE6800 (420 mm deep) and CE8850-32CQ-EI switches can be installed in a 600 mm or deeper cabinet, whereas the CE6800 (600 mm deep), CE7800, CE8850-64CQ-EI, CE8860, CE8861 and CE8868 can be installed in an 800 mm or deeper cabinet.
- On a switch, the side with power modules and fan modules is the power supply side, and the side with service ports is the port side. To leave sufficient cabling space, ensure that the distances from the port side and power supply side to the interior side of the cabinet doors are at least 130 mm and 70 mm respectively.
- The cabinet must have a reliable ground point to ground the switch.
- If the CE8800&7800&6800&5800 series switches are installed in the same cabinet with a CE12800 switch, keep a distance of 700 mm to 800 mm between the front and rear mounting rails.

5.3 Installing the Chassis in a Cabinet (CE8850-32CQ-EI and CE7800&6800&5800 Series Switches)

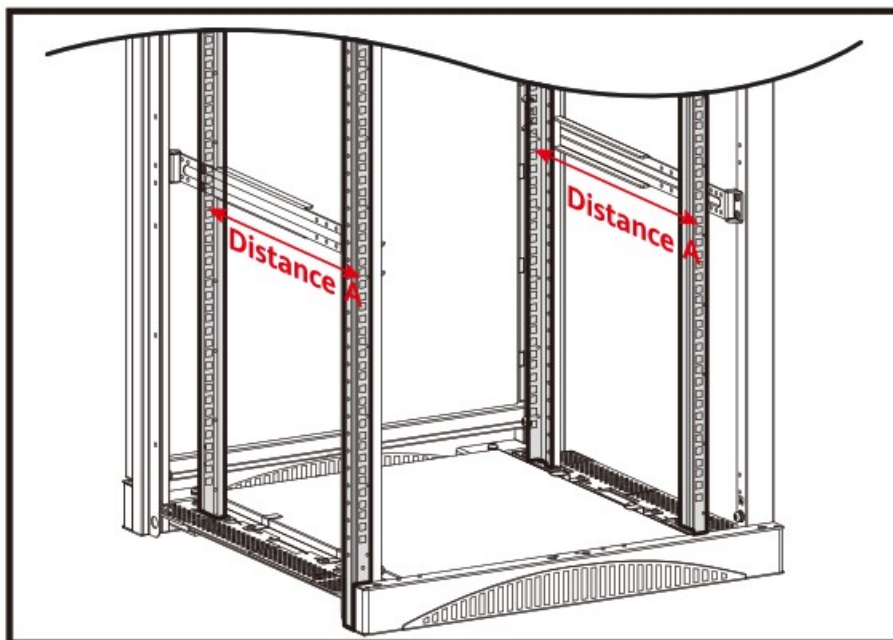
Before You Start

- Determine the directions of the port side and power supply side according to actual situations. If the switch needs to connect to servers in the same cabinet, make port sides of the switch and servers face the same direction to facilitate cable connections. Whether the mounting brackets should be installed near the port side or power supply side depends on the direction in which the chassis is installed. Ensure that the rear mounting brackets will not touch the cabinet door. The figures here are for reference only.
- If the distance between front and rear mounting rails is not within the required range, install guide rails or a tray (self-provided) in the cabinet/rack to support the chassis.
- Switch and mounting bracket mapping table.

Mounting brackets and guide rails	 Mounting bracket A	 Mounting bracket B	 Mounting bracket C	 Guide rail E	 Guide rail F
CE8850-32C Q-EI	Supported	Supported	Supported	Supported	Supported
CE7800&6800 (600 mm deep)	Supported	Not supported	Supported	Supported	Not supported
CE6800&5800 (420 mm deep)	Supported	Supported	Supported	Supported	Supported

Installation Procedure

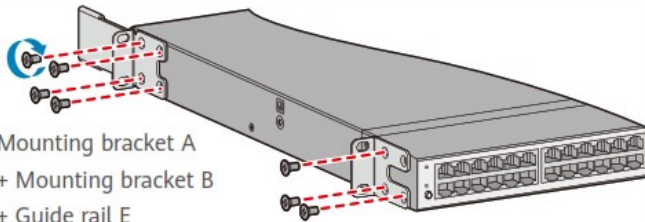
Step 1 Measure the distance between the front and rear mounting rails (distance A in the figure below). The type and installation method of mounting brackets and matching guide rails vary depending on this distance. (See values in the following table.)



Step 2 Fix mounting brackets to the switch with M4 screws.

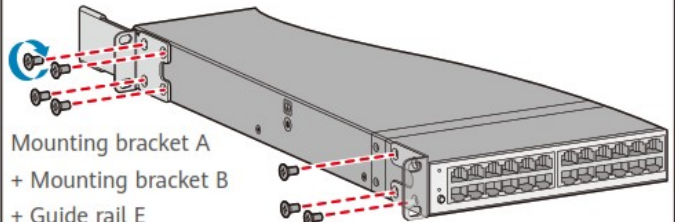
Mounting bracket and guide rail bundles for the CE8850-32CQ-EI&6800&5800 (420 mm deep)

310 mm-351 mm



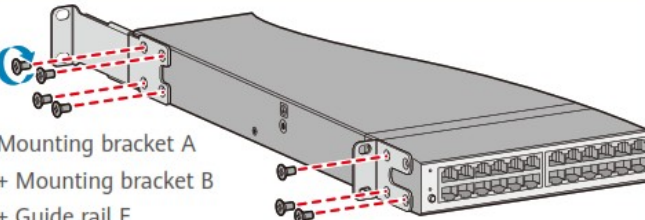
Mounting bracket A
+ Mounting bracket B
+ Guide rail E

369 mm-410 mm



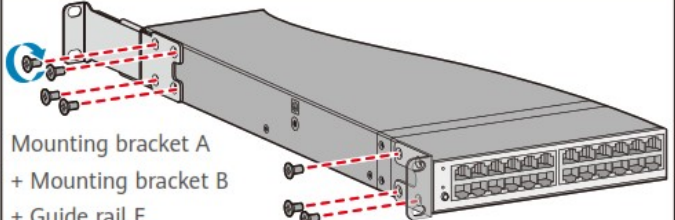
Mounting bracket A
+ Mounting bracket B
+ Guide rail E

438 mm-479 mm



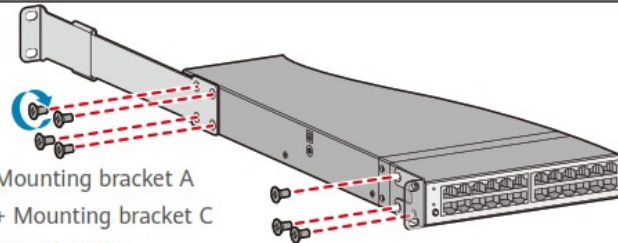
Mounting bracket A
+ Mounting bracket B
+ Guide rail E

497 mm-538 mm



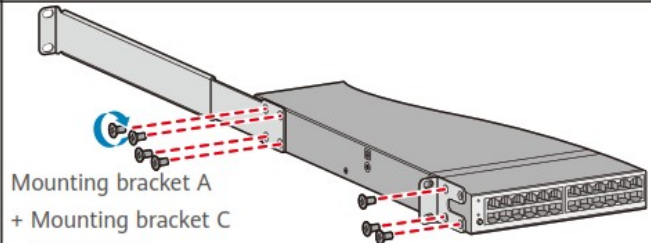
Mounting bracket A
+ Mounting bracket B
+ Guide rail E

539 mm-637 mm



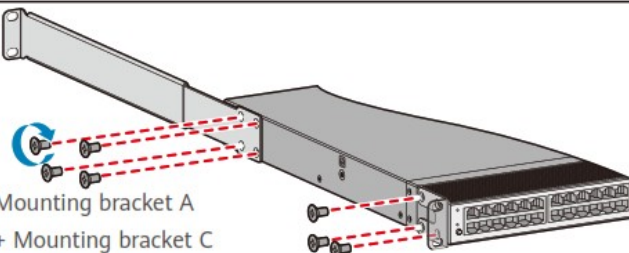
Mounting bracket A
+ Mounting bracket C
+ Guide rail E

638 mm-696 mm

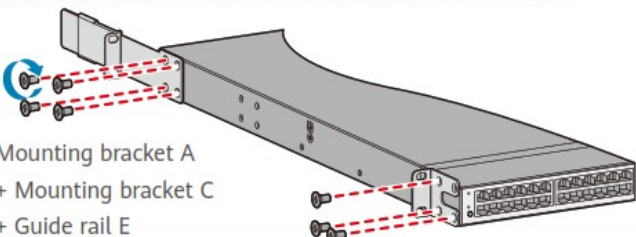
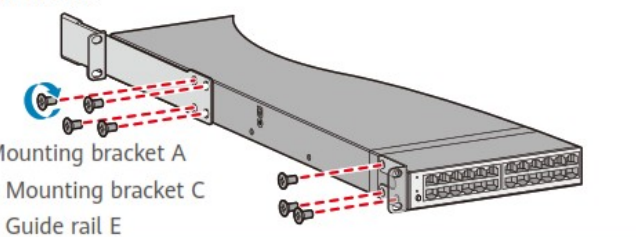
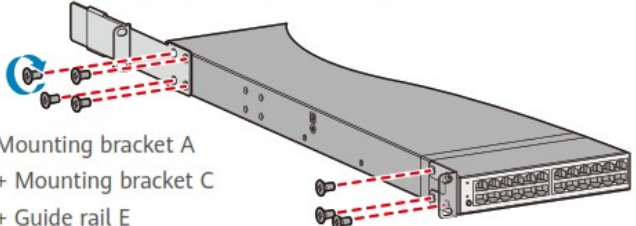
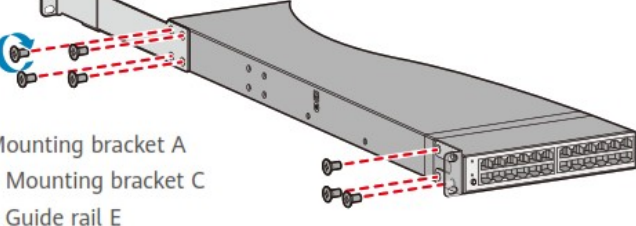


Mounting bracket A
+ Mounting bracket C
+ Guide rail F

697 mm-835 mm



Mounting bracket A
+ Mounting bracket C
+ Guide rail F

Mounting bracket and guide rail bundles for the CE7800&6800 (600 mm deep)	
493 mm-548 mm	549 mm-551 mm
<p>Note: If the cabinet is 800 mm deep, mounting bracket C will touch the cabinet door. Do not close the door at this side.</p>  <p>Mounting bracket A + Mounting bracket C + Guide rail E</p>	<p>Note: Install mounting bracket C in mounting holes at middle of the chassis.</p>  <p>Mounting bracket A + Mounting bracket C + Guide rail E</p>
552 mm-680 mm	681 mm-815 mm
<p>Note: If the cabinet is 800 mm deep, mounting bracket C will touch the cabinet door. Do not close the door at this side.</p>  <p>Mounting bracket A + Mounting bracket C + Guide rail E</p>	 <p>Mounting bracket A + Mounting bracket C + Guide rail E</p>

Step 3 Install eight floating nuts on the front and rear mounting rails, two on each mounting rail.

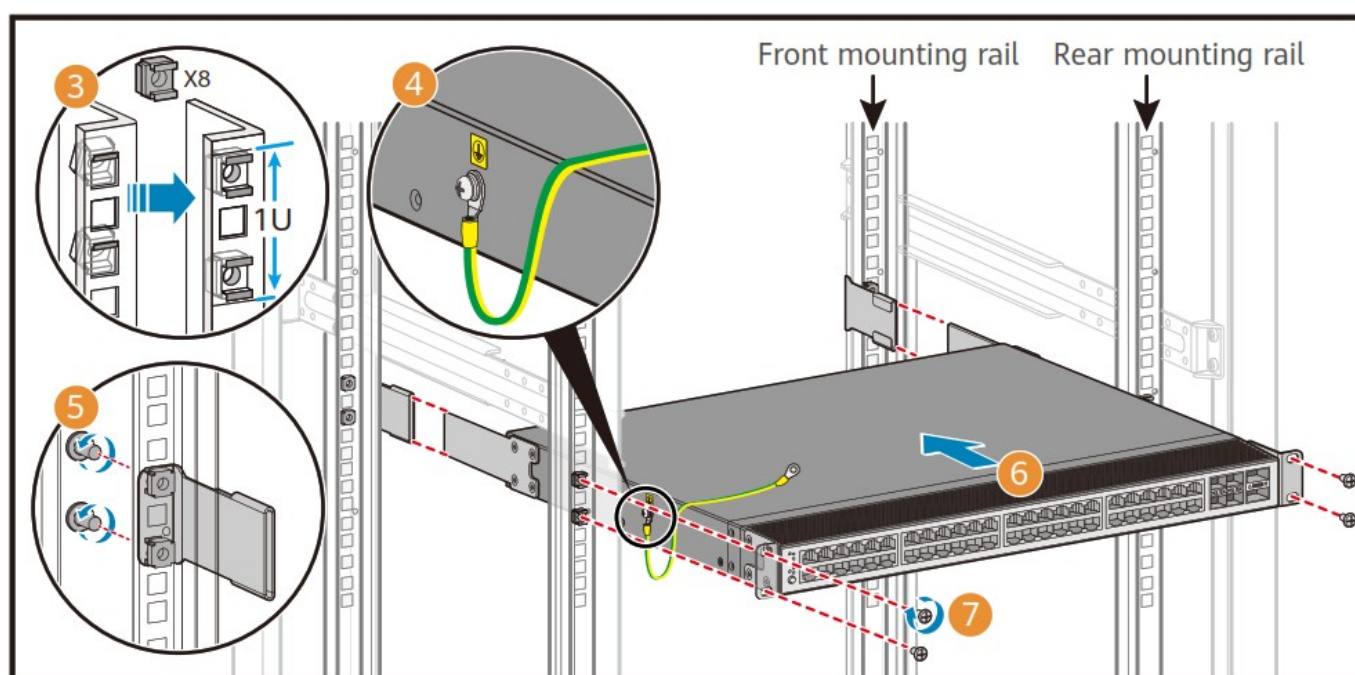
Step 4 Connect the ground cable to the chassis ground point and place the other end on top of the chassis. The ground point of the CE6850HI, CE6855-48T6Q-HI, CE6856-48T6Q-HI, CE6850U-HI and CE6875EI is located at the power supply side.

Step 5 Secure guide rails on the front mounting rails with M6 screws.

Step 6 Hold bottom of the chassis with both hands, align the mounting brackets with the guide rails, and slowly slide the chassis into the cabinet.

Step 7 Secure the chassis onto the cabinet with M6 screws.

Step 8 Connect the ground cable to the ground point on the cabinet.



5.4 Installing the Chassis in a Cabinet (CE8860, CE8861, CE8868 and CE8850-64CQ-EI Switches)

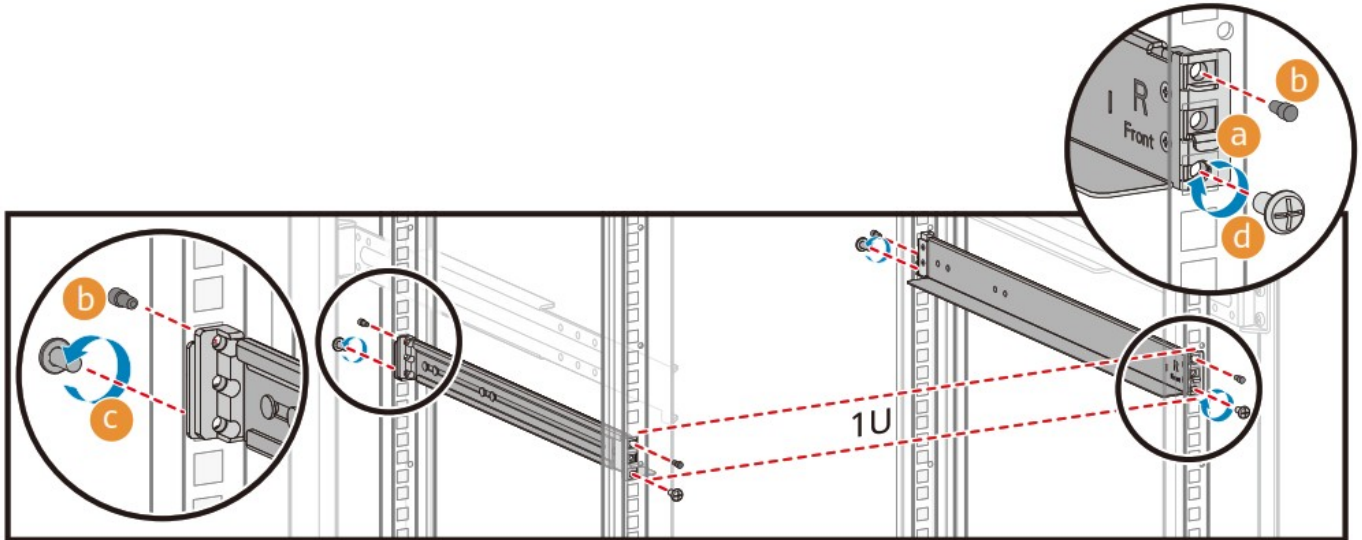
Before You Start

CE8860, CE8861, CE8868 and CE8850-64CQ-EI switches requires 3U of vertical space in a cabinet/rack.

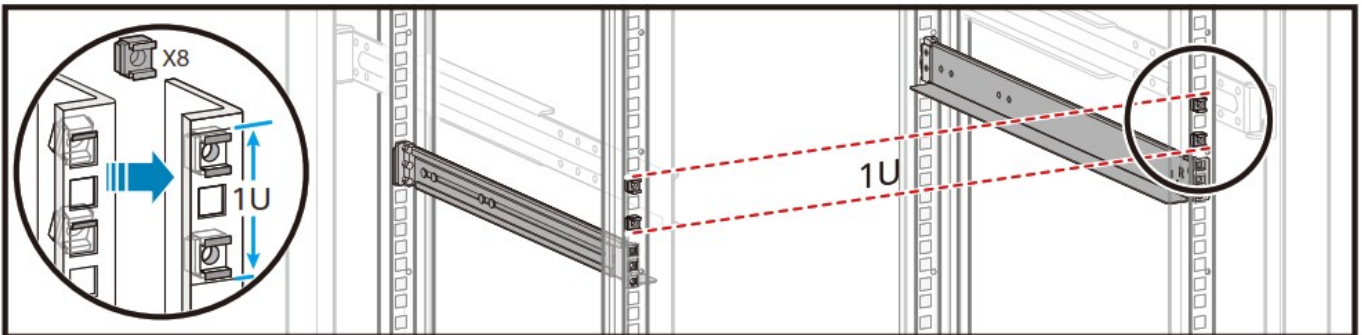
Installation Procedure

Step 1 Mount the expandable guide rails on the mounting rails.

- Hold a guide rail with its front side facing the front of the cabinet and move it to the planned position. Expand the guide rail and hook both sides on the mounting rails. Ensure that the three holes on the guide rails are in the same 1U space.
- Insert plugs on the top holes on both sides of the guide rail to secure the guide rail.
- Install an M6 screw in the lowest hole on the rear side of the guide rail.
- (Optional) Install an M6 screw in the lowest hole on the front side of the guide rail to enhance shock resistance of the switch.



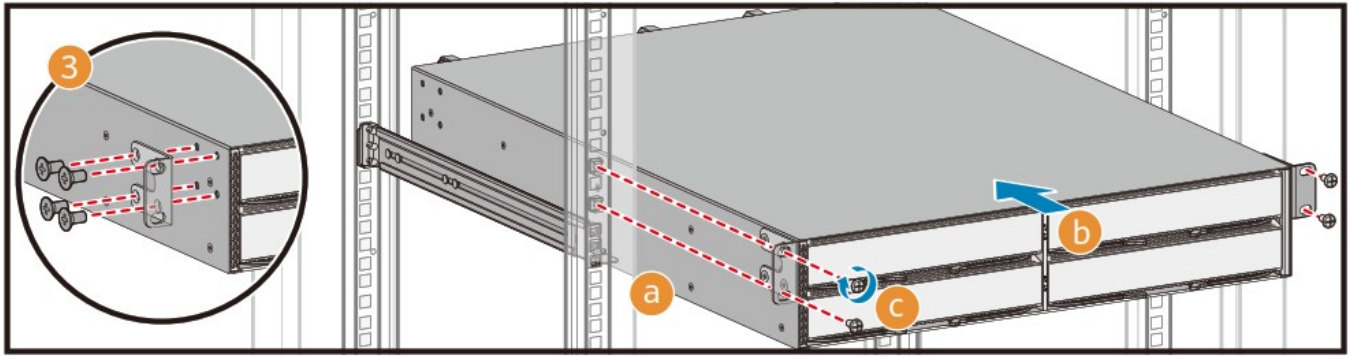
Step 2 Install two floating nuts in the 1U space above the guide rail on each front mounting rail.



Step 3 Install the front mounting brackets near the power supply side or port side depending on which side is facing the front. In the following figure, the front mounting brackets are installed near the port side.

Step 4 Install the switch in the cabinet.

- Lift the switch onto the expandable guide rails by two persons.
- Slowly push the switch into the cabinet until the front mounting brackets are closely attached to the floating nuts on the mounting rails.
- Secure the front mounting brackets on the mounting rails with M6 screws.





Step 5 Connect the ground cable to a ground point on the cabinet. The ground points of the CE8860, CE8861, CE8868 and CE8850-64CQ-EI are at the power supply side of the switches.



Installing Power Modules and Fan Modules

6.1 Selecting Power Modules and Fan Modules

CAUTION

- The switch must use the power modules and fan modules matching the product model.
- The power modules and fan modules used in the switch must have the same airflow direction.
- Power modules with different airflow directions or power values, AC and DC power modules, or fan modules with different airflow directions cannot be used in the same chassis.
- FAN-060A series fan modules can only be installed in CE6850HI, CE6850U-HI, CE6855-48T6Q-HI, CE6856-48T6Q-HI and CE6875EI. Installing them in other switch models may damage the fan modules or switches.

• Front-to-back airflow: Power modules and fan modules with front-to-back airflow are identified by a  or  flag. Air flows from the power supply side to the port side.

• Back-to-front airflow: Power modules and fan modules with back-to-front airflow are identified by a  or  flag. Air flows from the port side to the power supply side.

6.2 Installing Power Modules and Fan Modules into the Chassis

Before You Start

- If the switch is delivered with the power modules and fan modules installed in the chassis, you do not need to install the power modules and fan modules again.
- Before installing a power module or fan module, remove the filler panel in the slot.
- If only one power module is used, install a filler panel in the other power module slot.
- To ensure normal operating, the switch must have two normally running fan modules.
- Do not remove the two fan modules from the chassis simultaneously. Replace a fan module within 3 minutes.
- Power modules fixed using a captive screw and a lock are installed differently.
- Power modules and fan modules are hot pluggable. A fan module is installed the same way as a power module fixed with captive screws.

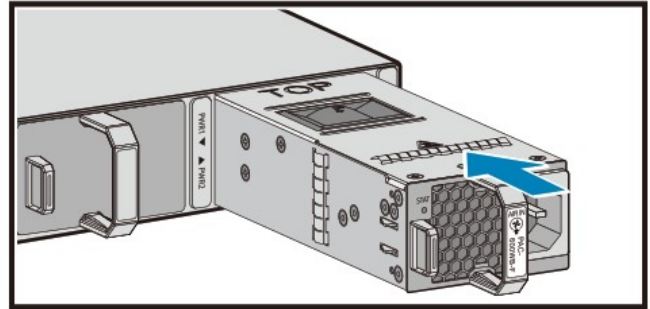
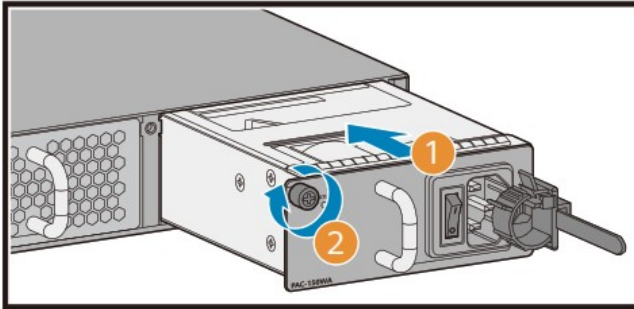
Installation Procedure

Power module secured by a captive screw Insert the power module into a power slot.

Step 1 Tighten the captive screw on the power module
Step 2 panel.

Power module secured by a lock

Insert the power module into a power slot. When the power module is completely seated in the slot, the lock is locked automatically.



Installing a Card into the Chassis

Before You Start

- Only the CE8860, CE8861 and CE8868 switches have extended slots for card installation.
- Install a filler panel in a vacant slot.
- Slowly push a card into the slot. If you feel resistance or find the card inclined, pull the card out and push it into the slot again. Forcing the card into the slot may damage connectors on the card and backplane.
- All cards are hot swappable.

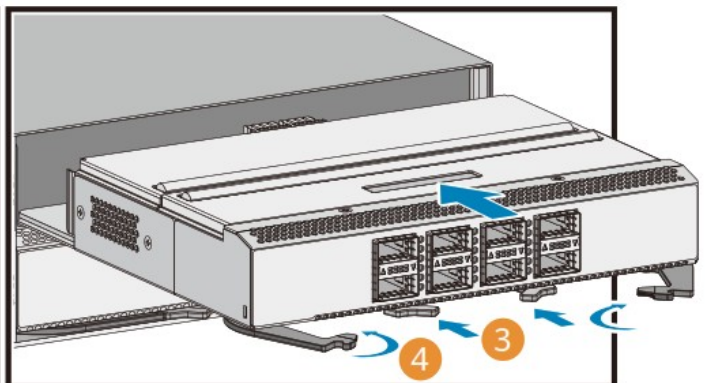
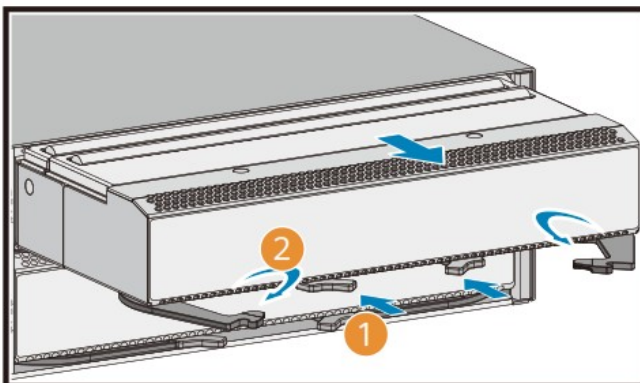
Installation Procedure

Step 1 Press the two green locking clips in the middle of the filler panel to eject the ejector levers.

Step 2 Turn the ejector levers outward and slowly pull the filler panel out.

Step 3 Press the two green locking clips in the middle of the card to eject the ejector levers.

Step 4 Slowly push the card into the slot, and then turn the ejector levers inward to lock the card in the slot. When the card is completely seated in the slot, the ejector levers will buckle with the locking clips.



Connecting Cables

Before You Start

■ Ground cable.

- The switch must be reliably grounded.

- Attach the M4 lug to the switch and the M6 lug to the ground point.

■ Ethernet cable.

- Category 5E or higher category Ethernet cables are recommended for GE electrical ports.
Category 6A shielded or higher category Ethernet cables are recommended for 10GE electrical ports.
- To protect the switch from lightning, route outdoor cables underground or in steel pipes. Do not route cables aerially.

■ Optical fiber.

- Optical fibers must be used with optical modules. Connectors of fibers and cables must be clean.
- Cover idle optical ports with dust plugs. All optical ports on a newly delivered switch are covered with dust plugs.
- The bend radius of optical fibers must be larger than 40 mm.
- 10GE optical ports use SFP/SFP+ optical modules and optical fibers, SFP+ AOC cables, or SFP+ copper cables.
- 25GE optical ports use SFP/SFP+ optical modules and optical fibers, SFP+ AOC cables, SFP+ copper cables, SFP28 optical modules and optical fibers, SFP28 AOC cables or SFP28 copper cables.
- 40GE optical ports use QSFP+ optical modules and optical fibers, QSFP+ AOC cables, or QSFP+ copper cables.
- 100GE optical ports use QSFP+/QSFP28 optical modules and optical fibers, QSFP+/QSFP28 AOC cables, or QSFP+/QSFP28 copper cables.

■ Country-specific AC power cable.

- Power cables must be more than 10 cm away from signal cables.
- The country-specific AC power outlet must have a current rating of 10 A and comply with local standards.
- The AC power cable must be locked using a locking strap or bundled to the power module handle using a velcro strap.

■ C13 straight female to C14 straight male AC power cable.

- Choose this type of power cable when the switch uses AC power modules and receives power from an AC PDU, or when it uses 600 W/1200 W AC&240 V DC power modules and receives power from a 240 V high-voltage DC PDU or power distribution box.
- If a 240 V high-voltage DC power distribution box is used, make OT or cord end terminals for the cable. Cut the C14 straight male connector off and crimp OT or cord end terminals on the bare wires. Connect the brown wire to a negative terminal on the DC power distribution box, the blue wire to a positive terminal, and the yellow-green wire to a protection ground.

- Notice the positive and negative tags on DC power cables and power terminals.
- 380 V high-voltage DC power cable.

- Choose this type of power cable when the switch uses high-voltage DC power modules and receives power from a 380 V high-voltage DC power distribution box or frame.
- The delivered cable has bare wires on one end, and OT or cord end terminals must be made for them onsite. Connect the brown wire to the positive pole, blue wire to negative pole, and yellow-green wire to protection ground.
- The power cable must be locked using a locking strap or bundled to the power module handle using a velcro strap.

■ Mini USB port.

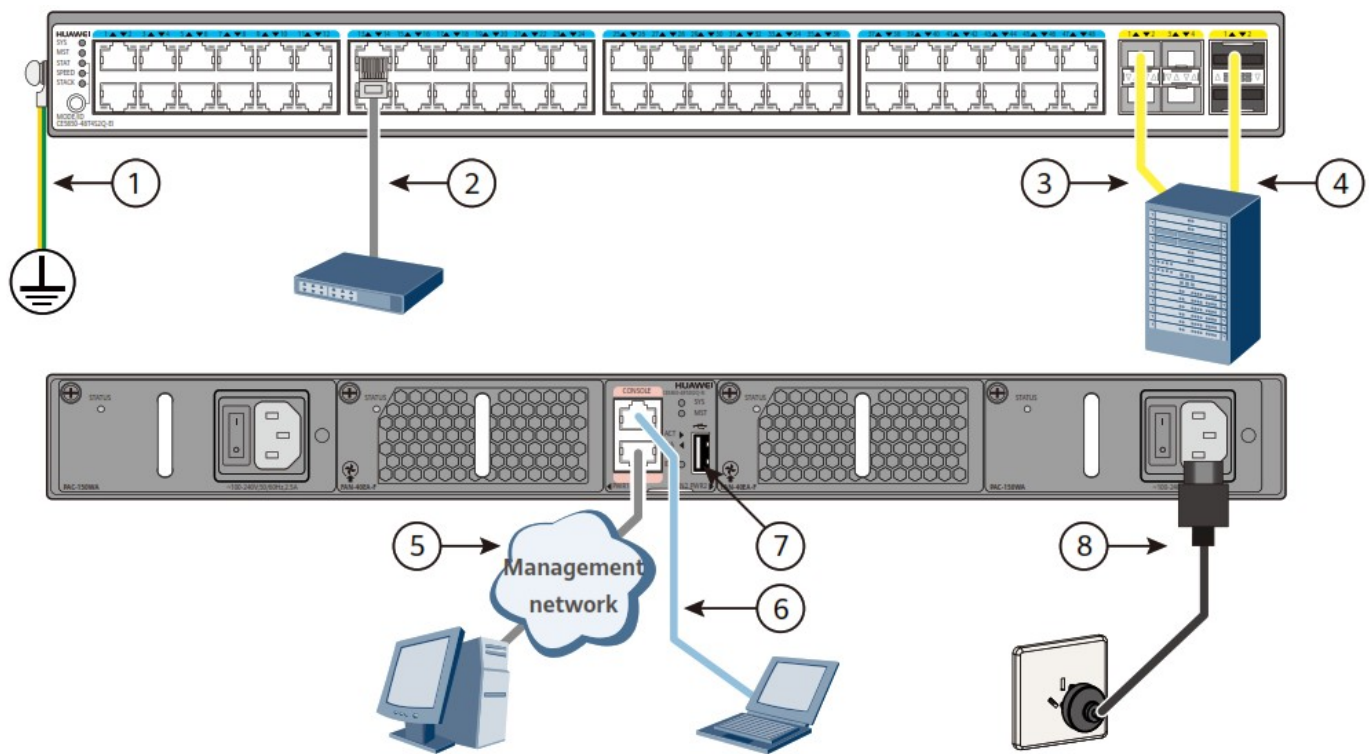
- The CE8860, CE8861, CE8868, CE8850-64CQ-EI, CE6850HI, CE6855-48T6Q-HI, CE6856-48T6Q-HI, CE6850U-HI and CE6875EI have a Mini USB port, which provides the same functions as a console port and uses a Mini USB cable.
- The Mini USB port and console port cannot be used together. Select either of them according to your needs. When both the two ports are connected, only the Mini USB port is active.










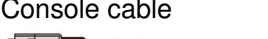
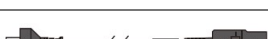




■ The USB port is used to transfer upgrade files and configuration files during a USB-based deployment.

■ Combo port.

- The CE6850HI, CE6855-48T6Q-HI, CE6856-48T6Q-HI, CE6850U-HI and CE6875EI have two ETH management ports, each of which is a GE combo port. The CE8860, CE8861, CE8868 and CE8850-64CQ-EI have two ETH management ports (GE RJ45). The two ETH management ports cannot be used simultaneously. Choose one of them and use the other as a backup.
- A GE combo port consists of a GE electrical port and a GE optical port. Only one of them can work at a time.
- Before start of the switch, you can select interface 1 (default) or interface 2 in the BIOS menu. For details, see the Guide Basic Configuration Guide – > BIOS Menu > Update from ethernet interface > Modify parameters.
Configuration

Connecting Cables



No.	Item	Connect To	No.	Item	Connect To
1	 Ground cable	Protection ground	2	 Ethernet cable	Switch or computer
3	 Optical fiber  AOC cable  Copper cable	Upstream network device or stacked switch	4	 Optical fiber  AOC cable  Copper cable	Upstream network device or stacked switch
5	 Ethernet cable	Operation terminal (usually a PC)	6	 Console cable	Operation terminal (usually a PC)
7	USB port	USB flash drive	8	 Country-specific AC power cable	Country-specific AC power outlet
8	 C13 straight female to C14 straight male AC power cable	AC PDU, 240 V high-voltage DC PDU or power distribution box	8	 DC power cable (for a 350 W DC power module)	DC power distribution box
	 380 V high-voltage DC power cable	380 V high-voltage DC power distribution box or power distribution frame		 DC power cable (for a 1200 W DC power module)	DC power distribution box

Logging In to the Switch

9.1 Logging In Through the Console Port

Before You Start

Install third-party terminal simulation software on the PC by referring to user manual or online help.

Login Procedure

Step 1 Use a console cable to connect a PC to the console port of the switch.

Step 2 Start the terminal simulation software, create a connection, select a serial port, and set communication parameters.

- Transmission rate: 9600
- Data bit (B): 8
- Parity bit: None
- Stop bit (S): 1
- Flow control mode: None

Step 3 Press Enter, and then enter a password as prompted. The configured password will be saved in the system.

An initial password is required for the first login via the console.

Continue to set it? [Y/N]: y Set a password and keep it safe! Otherwise you will not be able to login via the console.

Please configure the login password (8-16)

Enter Password:

Confirm Password:

- By default, the system will start the zero-touch provisioning (ZTP) process. To cancel this process, press Ctrl+C. For details about ZTP, see the **Configuration Guide** of the product.
- The password entered in interactive mode is not displayed on the screen.
- If password authentication is not configured, you do not need to enter a password, but this brings security risks. Password authentication is recommended.
- The password is a string of 8 to 16 case-sensitive characters. It must contain at least two types of the following: uppercase letters, lowercase letters, digits 0 to 9, and special characters excluding question mark (?) and spaces.
- After a login password is configured, this password will be required upon next login if password authentication is used on this user interface.
- If you forget the login password, see the **Troubleshooting** to restore the password.

Now you can configure the switch on the command line interface. For more information, see the for **Configuration Guide** your switch on the Huawei support website.

9.2 Logging In Through the Mini USB Port

Before You Start

- The CE8860, CE8861, CE8868, CE8850-64CQ-EI, CE6850HI, CE6850U-HI, CE6855-48T6Q-HI, CE6856-48T6Q-HI and CE6875EI support this login method.
- Install third-party terminal simulation software on the PC by referring to user manual or online help.

Login Procedure

Step 1 Use a Mini USB cable to connect a PC to the Mini USB port of the switch.

Step 2 Log in to <https://support.huawei.com/enterprise> to download the Mini USB driver CE_MiniUSB_driver. The Mini USB driver can only be used on Windows XP, Vista, and 7 operating systems.

Step 3 Install the Mini USB driver on the PC. Right-click My Computer and choose Manage > Device Manager > Port (COM and LPT). "TUSB3410 Device" is the Mini USB driver that you have installed. If "TUSB3410 Device" is not displayed in the device manager, reinstall the driver or use another Mini USB cable to connect the PC to the switch.

Step 4 Start the terminal simulation software, create a connection, and set communication parameters for the Mini USB port.

- Transmission rate: 9600
- Data bit (B): 8
- Parity bit: None
- Stop bit (S): 1
- Flow control mode: None

Step 5 Press Enter, and then enter a password as prompted. The configured password will be saved in the system.

For the information displayed and notes about the operation, see Step 3 in 9.1 "Logging In Through the Console Port." After completing this step, you can configure the switch on the command line interface. For more information, see the **Configuration Guide** for your switch on the Huawei support website.

Obtaining Product Documentation and Technical Support

- Log in to Huawei enterprise technical support website (<https://support.huawei.com/enterprise>), and select a specific product model and version to find its documentation.
- Log in to Huawei enterprise support community (<https://support.huawei.com/ecommunity>) and post your questions in the community.



Huawei Enterprise Technical Support
<http://support.huawei.com/enterprise>

Importer Information

Importer: Huawei Tech. Investment Co., Ltd. C/O Huawei Technologies Netherlands B.V.

Address: Karspeldreef 4, 1101 CJ Amsterdam, Netherlands VAT# NL815095326B01 Contact information: Huawei ETW/ Li Wenting/+31-20-4300732

Open Source Software Notice

- In versions earlier than V200R019C00, you can run the display copyright command in the user view to check

the open source software notice.

- In V200R019C00 and later versions, log in to <https://support.huawei.com/enterprise/en/software/index.html>, and check the open source software notice based on the product model and version.

Trademarks and Permissions



HUAWEI and other Huawei trademarks are trademarks of Huawei Technologies Co., Ltd. All other trademarks and trade names mentioned in this document are the property of their respective holders.

Copyright © Huawei Technologies Co., Ltd. 2020. All rights reserved.

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of Huawei Technologies Co., Ltd.



Supplier's Declaration of Conformity (SDoC)

Unique Identifier: trade name: HUAWEI; product name: Switch;
model number: CloudEngine 8800&7800&6800&5800 series switches

Party issuing Supplier's Declaration of Conformity

Huawei Technologies Co., Ltd.

Bantian, Longgang District,
Shenzhen, 518129, P.R.C

Tel: +86 755 28780808

Responsible Party- U.S. Contact Information

Huawei Technologies USA Inc.

5700 Tennyson Parkway, Suite 500

Plano, Texas 75024

Main: 214-919-6000 / TAC Hotline: 877-448-2934

FCC Compliance Statement (for products subject to Part 15)

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.




<https://manual-hub.com/>

Documents / Resources



[HUAWEI CloudEngine Series Switch](#) [pdf] User Guide CloudEngine Series Switch, CloudEngine Series, Switch

References

-  [Manual-Hub.com - Free PDF manuals!](#)
-  [Huawei Enterprise Product & Service Support - Huawei](#)
-  [Software & Firmware Download of Enterprise Products - Huawei](#)
- [User Manual](#)

Manuals+. [Privacy Policy](#)

This website is an independent publication and is neither affiliated with nor endorsed by any of the trademark owners. The "Bluetooth®" word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. The "Wi-Fi®" word mark and logos are registered trademarks owned by the Wi-Fi Alliance. Any use of these marks on this website does not imply any affiliation with or endorsement.