Cisco Catalyst 8300 Series Edge uCPE Hardware Installation

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CHAPTER 1

Overview of Cisco Catalyst 8300 Series Edg uCPE

The Cisco Catalyst ™ 8300 Series Edge Universal Customer Premises Equipment (uCPE) is x86 platform that is designed for branch virtualization. It enables device consolidation across ne security functions, improves operational flexibility and service agility, simplifies network operatio results in reduced deployment times and fewer truck rolls for delivery of add-on services.

Cisco Catalyst 8300 Series Edge uCPE Chassis

Chassis- Front Panel

1	Status LEDs	2	Phy (PIM or 5 con use

3	Network Interface Module (NIM) slot for additional L2/L3 MACsec, Power over Ethernet (PoE) ports (for future use)	4	E1.S di (For fut
5	U.2 2.5-inch disk slots x 2	6	RFID
7	M.2 disk slot (75 GB USB M.2, 600 GB or 2 TB NVMe disk)		

Chassis- Bezel Side

1	PSU Slot	2	GND Lu Point
3	Fan Tray Visible through chassis.	4	Chassis
5	PSU Slot		

Chassis- Internal

1	DIMM slots x 4	2	Fan Tra

Location of Labels on Cisco Catalyst 8300 Series Edge uCP

The figure below shows the location of the labels on the Cisco Catalyst 8300 Series Edge uCPE located at the same location on all the Cisco Catalyst 8300 Series Edge uCPE.

1	Product labels location

1	Compliance label location

Hardware Features

- USB-A 3.0 and Micro-USB Console port:You can use this port to connect a mouse, keyboard, o other USB device. Using a USB hub, you can connect more than one USB device to this port. this port is backward compatible, you can also use an older version of USB devices on this por
- Front panel Gigabit Ethernet ports: There are 4 SFP ports and 4 Copper ports (GE0 supports 8 POE standard and UPOE+ PD if compliant with 802.3bt).
- M.2 storage module: This is a high capacity storage component. The OS is installable in this m The storage capacity of this module is upgradeable. The storage capacity is 75GB USB M.2 or NVME M.2 or 2TB NVME M.2.
- CPU: Ice Lake 20-core HCC with all core turbo frequency of 2.5 GHz, D2796NFT base frequen GHz and max turbo frequency of 3.1 GHz.
- Dual In-Line Memory Modules (DIMMs): Stores the running configuration and routing tal used for packet buffering by the network interfaces.

Note

- Supports maximum of 128 GB of main memory with 4 x 32 GB DDR4 DIMMs.
- Four DIMM slots, numbered from 0 to 3 with a frequency of 3200 MHz .
- Uses DDR4 DIMMs for the main memory.
- Memory DIMM combinations allowed: 1 x 32GB, 2 x 16GB, 2 x 32GB, 4 x 16GB, 4 x 32GB.

- Network Interface Module (NIM): The device supports one NIM when you need additional ports data sheet for supported NIMs.
- Pluggable Interface Module (PIM): The device supports one PIM for cellular connectivity. See sheet for supported PIMs.

Note For proper thermal functioning of the system, all module slots or optional components (PIM, NIM, E1.S, M.2 and U.2) that do not have a functional module installed must be provisioned with a blank filler.

Status Indicators and LEDs for Gigabit Ethernet Ports

The front panel Gigabit Ethernet ports has eight ports: four RJ45 ports and four SFP ports.

1	LED indicator for power supply	2	LE stat
3	LED indicator for environmental status	4	LE bea
5	CPU Activity	6	Lin
7	Activity for 0/0 - 0/2 copper ports	8	Lin
9	Link/LOS for SFP 0/3~0/6		

1	E1.S Activity	2	Haz
3	SSD Activity for U.2 slot		

Status Indicators and LEDs for Gigabit Ethernet Ports

LED Definition	Color	Description
GE0-2 RJ45 Activity LED	G	**Ethernet port 0/1** Off: No Activity E Ethernet Activity
GE0-2 RJ45 Link LED	G	**Ethernet port 0/** Off: No link Green present and link e other side
SFP+ 0-3 Link LED	G/Y	**SFP+ port 0/1/2/3** Not present or no Yellow : Loss of S Green: Link estab
BMC Management port Activity LED	G	**BMC Managem Activity LED Off:** Blinking Green :
BMC Management port Link LED	G	**BMC Managem Link LED Off: No** Ethernet cable pr established with c

LED Definition	Color	Description
PWR (1 LED)	**R/Y LED1**	**Power supply st** The system is pow (Green + Red) : A F is not functioning All installed PSUs correctly
STATUS (1 LED)	**R/G/Y LED2**	**Status LED GRE** fine AMBER - x86 mode (setup men — x86 Secure bo x86 is UP but BIOS yet (bios post cmp x86 in power-off s

LED Definition	Color	Description
ENV (1 LED)	**R/G/Y LED3**	**ENV LED Off** active. Red: T detected a cri and may shut Amber: One o sensors in the the acceptabl or more fans in outside the ac Green: All tem fans in the sys acceptable ra
Beacon (1 LED)	**B LED4**	**Beacon LED C** Blue : The ad to show the ro

Warning Class I(CDRH) and Class 1M (IEC) laser products. Statement 1055

Fans, Ventilation, and Airflow

The chassis temperature is regulated with internal fans. Onboard sensors control the fan speed. always on when the device is powered on. Under all conditions, the fans operate at the slowest speed p to conserve power and reduce noise. When necessary, the fans operate at higher speeds for dif environmental conditions.

Figure 1: Airflow direction from front to back

Fans, Ventilation, and Airflow

CHAPTER 2

Prepare for Installation

Safety Recommendations and Warnings

Review the safety warnings listed in Regulatory Compliance and Safety Information for the Cisc
8300 Series Edge uCPE before installing, configuring, or maintaining the device.

Read the following safety guidelines before you install this product:

Warning This warning symbol means danger. You are in a situation that could cause bodily injury. B
on any equipment, be aware of the hazards involved with electrical circuitry and be familia
practices for preventing accidents. Use the statement number provided at the end of each
its translation in the translated safety warnings that accompanied this device. Statement 1

Warning Ultimate disposal of this product should be handled according to all national laws and regu
9001

Warning Installation of the equipment must comply with local and national electrical codes. Stateme

Always follow these electrostatic discharge (ESD) prevention procedures when removing and re
modules:

- Ensure that the chassis is electrically connected toground.

- Wear an ESD-preventive wrist strap, ensuring that it makes good skin contact. Connect the clip unpainted surface of the chassis frame to channel unwanted ESD voltages safely to ground. T against ESD damage and shocks, the wrist strap and cord must operate effectively.
- If no wrist strap is available, ground yourself by touching a metal part of the chassis.

Note For the safety of your equipment, periodically check the resistance value of the anti-static strap between 1 and 10 megaohms (Mohm).

Safety with Electricity

Follow these general guidelines when working on equipment that is powered by electricity:

- Locate the emergency power-off switch in the room in which you are working. If an electrical ac occurs, you can quickly turn off the power.
- Disconnect all power before doing the following:
  - Installing or removing a chassis.
  - Working near power supplies.
- Look carefully for possible hazards in your work area, such as moist floors, ungrounded power cables, frayed power cords, and missing safety grounds.
- Do not work alone if hazardous conditions exist.
- Never assume that power is disconnected from a circuit. Always check.
- Never open the enclosure of the internal power supply.
- If an electrical accident occurs, proceed as follows:
  - Turn off power to the device.
  - Call for help.
  - Determine if the person needs rescue breathing or external cardiac compressions; then take app action.

Follow these guidelines when working with any equipment that is disconnected from a power source still connected to ethernet wiring or other network cabling:

- Never install ethernet wiring during a lightning storm.
- Never install ethernet jacks in wet locations unless the jack is specifically designed for it.
- Never touch uninsulated ethernet wires or terminals unless the ethernet line is disconnected atthe netw interface.
- Use caution when installing or modifying ethernet lines.
- Remove power cables from all installed power supplies before opening the chassis.

Always follow these electrostatic discharge (ESD) prevention procedures when removing and re
modules:

- Ensure that the router chassis is electrically connected to ground.
- Wear an ESD-preventive wrist strap, ensuring that it makes good skin contact. Connect the
  unpainted surface of the chassis frame to channel unwanted ESD voltages safely to groun
  against ESD damage and shocks, the wrist strap and cord must operate effectively.
- If no wrist strap is available, ground yourself by touching a metal part of the chassis.

Caution For the safety of your equipment, periodically check the resistance value of the anti-static s
between 1 and 10 megaohms (Mohm).

Site Requirements

Follow the general precautions listed below when installing or working with your device:

- Do not block cooling vents.
- Route system cables, and the power supply cable and plug so that they cannot be stepped on ortr
  over. Be sure that nothing else rests on your system component cables or power cable.
- If you turn off your system, wait at least 30 seconds before turning it on again to avoid system com
  damage.

Warning This product relies on the building's installation for short-circuit (overcurrent) protection. En
protective device is rated not greater than: 20A Statement 1005

Mounting Requirements

The height, width, depth and weight of the chassis are displayed in this table:

Characteristic	Measurement
Height	1 RU (1.73 inches, 4.39 cm)
Width	17.5 inches (44.45 cm)
Depth	17.5 inches (44.45 cm)
Weight	19 lb (9.015 kg) when fully configured

To place the system in a proper location, it is necessary to know the dimensions of the device's

The Catalyst 8300 uCPE can be:

- Mounted on a desktop

- Mounted in a rack or cabinet (optional 4-point kit to use if rear support is required)
- Mounted on a wall

The positioning of your device and the arrangement of your equipment rack or wiring room are cruci
for optimal functionality. Placing equipment too closely, poor ventilation, and panels that are hard to
can lead to malfunctions, shutdowns, and pose challenges for maintenance. Ensure that both the fr
rear panels of the device are easily accessible during your planning process.

This information can help you plan the rack configuration for your equipment:

- Allow clearance around the rack for maintenance.
- Enclosed racks must have adequate ventilation. Ensure that the rack is not congested, because each
  generates heat. An enclosed rack should have louvered sides and a fan to provide cooling air.
  generated by equipment near the bottom of the rack can be drawn upward into the intake ports
  equipment above it.
- When mounting a chassis in an open rack, ensure that the rack frame does not block the intake or exh
  ports. If the chassis is installed on slides, check the position of the chassis when it is seated in the rac

Power Guidelines and Requirements

Check the power at your site to ensure that you are receiving "clean" power (free of spikes and nois
a power conditioner if necessary.

Warning When installing the product, please use the provided or designated connection cables/power c
adaptors/batteries. Using any other cables/adaptors could cause a malfunction or a fire. Electr
and Material Safety Law prohibits the use of UL-certified cables (that have the "UL" or "CSA" s
cord), not regulated with the subject law by showing "PSE" on the cord, for any other electrical
products designated by CISCO. Statement 371.

Warning You are strongly advised to read the safety instruction before using the product.

https://www.cisco.com/web/JP/techdoc/pldoc/pldoc.html

When installing the product, please use the provided or designated connection cables/power c
adaptors. Statement 407.

Warning This unit might have more than one power supply connection. To reduce risk of electric shock,
must be removed to de-energize the unit. Statement 1028.

Network Cabling Specification

- Ethernet cables for RJ45 ports.

- Serial or console cables used to connect devices like routers.
- Shielded USB cables with properly terminated shields for the USB port.

Required Tools and Equipment

You will need the following equipment to install the device and its equipment:

- ESD-preventive cord and wrist strap
- Phillips screwdrivers: small, 3/16-in. (4 to 5 mm), and medium, 1/4-in. (6 to 7mm)
- Screws that fit your rack
- Wire crimper for chassis grounding - to be used along with the ground lug kit
- One 14 AWG cable for the ground lug kit

In addition, depending on the type of modules you plan to use, you might need the following equ
connect a port to an external network

- Cables for connection to the WAN and LAN ports (depending on the configuration)

Note If you order the required cables when you purchase the device, the cables ship along with

Pr

Required Tools and Equipment

CHAPTER 3

Install the Cisco Catalyst 8300 Series Edge

Unpacking the Device

The device, accessory kit, publications, and any optional units may be shipped in more than one
When you unpack the containers, check the packing list to ensure that you have received all the
list.

Only unpack the product when you are ready to install it. This will help prevent accidental damag

Installing the Cisco Catalyst 8300 Series Edge uCPE

If not already installed, the DIMMs must be installed before rack-mounting the chassis.

Desktop-Mounting the Chassis

The Catalyst 8300 uCPE has circular markings on the bottom of the chassis for rubber feet. App
feet when installing the router on horizontal surface (desk or shelf).

Figure 1. Desktop-mounting the chassis

1	Rubber feet
2	Circular markings for placing the feet

Rack-Mounting the Chassis

The Catalyst 8300 uCPE can be installed in 19-inch (48.26-cm) or 23-inch (58.42-cm) racks. The mo
ears for the device are designed for #12 screws for securing to the rack.

The device can be rack-mounted in the following ways:

- Front (I/O-face) mounting—Brackets attached at the front of the chassis with the front panel (I/
  forward
- Back (PSU-side) mounting—Brackets attached at the back of the chassis with the back (PSU-s
  facing forward

Attaching Brackets to the Chassis

Attach one mounting bracket to each side of the device as shown in following figures. Four screws are requi
to attach each bracket to the device. Screws are provided with the mounting kit to attach the screws
device.

Figure 2. 19" or 23" Bracket Installation for Front

1	23 inches RM brackets
2	19 inches RM brackets
3	Securing screws

Brackets have optional securing locations so they can be mounted flush to the I/O-face or reces face when RFID is provisioned. The following image shows the brackets secured to the I/O-face in the r position (RFID is applied). If flush securing is desired, slide the bracket forward and secure the c bracket-securing holes.

Note Recessed mounting is not supported on the PSU-face.

Figure 3. Rack mount brackets applied recessed from

I/O-face

1	RFID provisioned (reference)
2	Rack-mount bracket
3	Screws

Figure 4. Rack mount brackets applied flush to

1	Rack-mount bracket

Mounting the device in a Rack

After brackets are secured to the device, install the chassis in the rack as shown in following figu
screws are required to secure in the rack. The screws for attaching the device to the rack are not provid
the kit.

Tip For both the 19 inch EIA brackets and 23 inch brackets, start the lower pair of screws first, and the
brackets on the lower screws while you insert the upper pair of screws.

Tip The screw slots in the brackets are spaced to line up with every second pair of screw holes in the
the correct screw holes are used, the small threaded holes in the brackets line up with unused scr
the rack. If the small holes do not line up with the rack holes, you must raise or lower the brackets
rack hole.

Warning To prevent bodily injury when mounting or servicing the unit in a rack, you must take special pr ensure that the system remains stable. The following guidelines are provided to ensure your sa

- The unit should be mounted at the bottom of the rack if it is only one unit in the rack.
- When mounting this unit in a partially filled rack, load the rack from the bottom to the top heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or se unit in the rack. Statement 1006.

Warning To prevent personal injury or damage to the chassis, never attempt to lift or tilt the chassis usin on modules (such as power supplies, fans or cards); these types of handles are not designed to suppo weight of the unit. Statement 1032

The following figures show a typical rack mounting of a chassis in a rack.

1. Locate the desired position in the equipment rack.

2. Align the holes in the rack mount brackets with the mounting holes in the equipment frame.

3. Secure the device using mounting screws appropriate for your equipment frame. The rack mount have been designed #12 screws.

4. Tighten the screws to the appropriate torque value for your equipment.

Figure 5. Mounting the Chassis on the Rack- Front (I/O face) shown for 19 inches RM

1	Securing screws (customer provid
2	19" Rack upright

Figure 6. Mounting the Chassis on the Rack- Front (I/O face) shown for 23"

1	Securing screws (customer provided)
2	23" Rack upright

Tip The screw slots in the brackets are spaced to line up with every second pair of screw holes in the rack the correct screw holes are used, the small threaded holes in the brackets line up with unused screw h the rack. If the small holes do not line up with the rack holes, you must raise or lower the brackets to th rack hole.

4-point Mounting in a Cabinet

4-point mounting is supported for 19" cabinets that require rear-support of the device. A range of rea depths is supported depending whether flush-mounting or recessed-mounting is chosen.

Figure 7. 4-Pt kit assembly for 19" cabinets (recessed-mounting

shown)

1	19" rackmount brackets
2	Securing screws
3	Slider bracket
4	Rear bracket (adjustable depth)
5	RFID (reference)

Figure 8. Flush Mount (No RFID) Depths

Figure 9. Recessed-Mount Front Bracket Depths

Wall-Mounting the Chassis

Wall-mounting is supported for the device.

For safety reasons, the device must be mounted as shown in the following figure with the I/O-face to t
I/O-face may be oriented to the right (as shown) or to the left, but only a side of the chassis may be fa
down.

1. Attach the brackets to the device using the screws provided with the mounting kit.

Two screws should be used to attach each bracket to the chassis as shown in the following figu

Note The wall-mounting kit is different from the rack-mounting kit.

Figure 10. Showing securing of brackets to the side of the device for wall-mounting

1	Mounting bracket
2	Securing screws
3	Bushings

2. Fix the chassis to the wall using the brackets that you attached to the device.

The screws or anchors for attaching the device to the wall are not provided with the kit. Depend
the type of wall (wood, brick, stone etc), use appropriate screws or anchors to fix the device to t

Note Route the cables so that they do not put a strain on the connectors or mounting hardware. For saf
the chassis may only be mounted with ports going out in left or right direction. Do not mou
ports facing upward or downward direction.

Figure 11. Showing locations of holes in the brackets that can be used to secure to the wall

Vertical spacing; hole centre to hole centre	18.4"
Horizontal spacing; hole centre to hole centre	12.06"

Grounding the Chassis

Warning This equipment must be grounded. Never defeat the ground conductor or operate the equipment i of a suitably installed ground conductor. Contact the appropriate electrical inspection autho if you are uncertain that suitable grounding is available. Statement 1024

Warning To reduce risk of electric shock, when installing or replacing the unit, the ground connectio made first and disconnected last. Statement 1046

Figure 1. Grounding the Chassis

1	Ground lug
2	Screws

These are the steps to install the ground connection for the device. The ground lug kit is provided wi
chassis:

Before you begin

- Connect the chassis to the earth ground; the ground wire must be installed in accordance with
  electrical safety standards.
- For grounding, use size 14 AWG copper wire and the ground lug provided in the accessory kit.

1. Strip one end of the ground wire to the length required for the groundlug.

2. Crimp the ground wire to the ground lug using a crimp tool of the appropriatesize (7/8" strip lengt

3. Attach the ground lug to the chassis as shown in the figure. Use the screws provided along with the ground
lug to attach the lug to the device.

Initial Server Setup

Local Connection Procedure

- Ensure that the device is powered on.
- Connect serial console port on the front panel of the device.
- When you see the prompt, you can press F2 to get into the setup (BIOS) to change some settings.
- After you have performed the required configuration, save the setup and continue to boot.

For more information on initial server setup see, Hardware Installation Guide for Cisco Catalyst 830
Edge uCPE.

Remote Connection Procedure

- Plug in your terminal server to the Serial port (Refer to Front panel of Chassis).
- Telnet into the console and perform the necessary configuration using corresponding comm

Initial Server Setup

CHAPTER 4

Install and Upgrade Field Replaceable Un

Removing and Replacing the Chassis Cover

Figure 1. Removing and Replacing the chassis cover

These are the steps to remove the chassis cover:

1. Confirm that the chassis is turned off and disconnected from the power supply or power supp

2. Place the chassis on a flat surface.

3. Remove the screws at top of the chassis cover.

4. Remove screws from each side and top of the device as shown in the above figure.

5. **Lift the chassis cover after you have removed all the screws.**

Note To replace the chassis cover, place the cover evenly on the top of the device and use the screws to se
to the device.

- Installing a Dual In-line Memory Module (DIMM), on page 30
- Removing a DIMM, on page 31
- Installing the M.2 Storage Module, on page 31
- Installing and Removing a Network Interface Module (NIM), on page 33
- Installing Pluggable Interface Module, on page 34
- Installing Drive Bays, on page 35
- Replace (Remove and Install) Fan Tray, on page 37
- Remove Small Form Pluggable Modules, on page 38

Installing a Dual In-line Memory Module (DIMM)

There are four DDR4 DIMM slots. DIMMs have a polarization notch on the connecting edge to preve
incorrect orientation of the module during insertion.

Figure 1. DIMM Showing Polarization Notch

1 Polarization Notch

These are the steps to install a DIMM:

1. **Remove the chassis cover.**
2. **Locate the DIMM slots on the device. There are four DIMM slots in the chassis and you can install**
   DIMM module on any of the slots.
3. **Make sure that both latches on the DIMM connector are in the open position.**

Figure 2. DIMM orientation

4. Orient the DIMM so that the polarization notch lines up with the polarization key on the connec
5. Insert the DIMM into the connector.
6. Replace the chassis cover.

Removing a DIMM

These are the steps to remove a DIMM:

1. Remove the chassis cover.
2. Locate the DIMM module on the device. Refer to the Chassis-Internal section to id DIMM module.
3. Pull the latches away from the DIMM at both ends to lift the DIMM slightly. Pull the DIMM out of socket.
4. Place the DIMM in an antistatic bag to protect it from ESD damage.
5. Replace the chassis cover.

Installing the M.2 Storage Module

The M.2 storage modules come with different storage capacities and can be replaced through th if required.

Installing the M.2 Storage Module

These are the steps to upgrade the M.2 storage module:

1. **Power off of the system before replacing M.2.**
2. **Locate the M.2 storage module slot. Refer to Chassis - Front Panel to identify and locate the modu**

Figure 1. M.2 storage module slot

3. **Loosen the screws that secures the M.2 blank cover or existing M.2 module in the slot. Remove th** cover or existing module.

Note The disk used in M.2 is also the boot disk. If you replace the M.2 disk, you must reinstall C operating system once again.

4. **Plug in the new M.2 storage module in the same location and secure it with the screws.**

Figure 2. M.2 storage module slot opened

1 Securing screws (torque 3.9-5.4 in-lbs)	2 M.2 module orientation wi top, M.2 module underne
3 Chassis cutout prevents M.2 installation in wrong orientation.	

Installing and Removing a Network Interface Module (N

These are the steps to install a NIM:

1. Locate the NIM slot on the front panel.

2. Loosen the screws to remove NIM blank cover.

3. Insert the NIM into the slot.

4. Tighten the screws to secure the NIM in the slot.

Figure 1. Securing the NIM in the slot

Table 1:

1	Screws
2	NIM face

These are the steps to remove a NIM:

1. **If the NIM is up and running, issue the following command to shut down the NIM gracefully before**
   removing it:

   hw-module subslot slot 0/2 stop

Caution If you do not shut down the NIM gracefully before removing it, the NIM card could get dam

2. **Locate the NIM slot on the front panel.**
3. **Loosen the screws that secure the NIM.**
4. **Gently pull out the NIM from the slot.**

All module slots must have a module or blank installed for the product to work thermally and for safe
purposes.

Installing Pluggable Interface Module

To insert the PIM into the router, do these steps:

1. **Insert and then gently push the PIM into the pluggable slot until firmly fixed.**

2. Tighten the screw.

Figure 1. PIM slot

1	Securing screw	2	PI

Installing Drive Bays

If you have not ordered drives, the drive bay slot is closed with a blank cover.

These are the steps to install a drive in a drive bay:

E1.S Modules

Note The drive bay is in the front panel of the device. The bay is closed with a cover if there are no driv
slots.

1. Remove the filler in the E1.S slot

2. Press the latch-release button on the E1.S module so that the latch springs to the open positio

3. Slide the E1.S module in the slot and push forward until the module seats in the connector.

4. To secure the module in the chassis, close the latch until it catches the latch-release button.

Figure 1: Inserting the E1.S module in the slot

1	Latch-release button
2	Latch (shown open position)
3	E1.S Module

Figure 2: Securing the E1.S module in the chassis

Note Keep the drive bays covered when there are no drives installed in the slot

SSD 2.5" Drives

Note The drive bays are in the front panel of the device. The bays are closed with a cover if there are n
the slots.

1. **Remove the blank in the SSD slot**
2. **Install the drive into the slot and push forward until the drive seats in the connector**
3. **To secure the drives in the chassis, secure the screws on each side of the drive face**

Figure 3: Installing the SSD 2.5" drives

1	Screws
2	SSD 2.5" Drives

Replace (Remove and Install) Fan Tray

1. **Remove the top cover.**
2. **Remove the two screw that secure the fan tray in the chassis.**

3. Disconnect fan cables from the motherboard.

4. Remove the fan tray by lifting up out of the chassis.

5. To install, perform these operations in reverse.

Figure 1: Removing/Installing the fan

tray

1	Screws
2	Fan tray

Remove Small Form Pluggable Modules

Follow these steps to remove a Small Form Pluggable (SFP) from the device:

Step 1 Read the Safety Warnings section and disconnect the power supply before you perform any module replacement

Step 2 Disconnect all cables from the SFP.

Warning Invisible laser radiation may be emitted from disconnected fibers or connectors. Do not stare into b view directly with optical instruments. Statement 1051

Caution The latching mechanism used on many SFPs locks the SFP into place when cables are connected pull on the cabling in an attempt to remove the SFP.

Step 3 Disconnect the SFP latch.

Note SFP modules use various latch designs to secure the module in the SFP port. Latch designs are not lin SFP model or technology type. For information on the SFP technology type and model, see the side of the SFP.

Figure 1: Disconnecting SFP Latch Mechanisms

1 Sliding latch
2 Swing and slide latch
3 Bale-clasp latch
4 Plastic collar latch

Tip Use a pen, screwdriver, or other small straight tool to gently release a bale-clasp handle if you it with your fingers.

Step 4 Grasp the SFP on both sides and remove it from the device.

Remove Small Form Pluggable Modules

CHAPTER 5

Laser Safety Guidelines

Optical Small-Form Pluggable (SFPs) use a small laser to generate the fiber-optic signal. Keep
transmit and receive ports covered whenever a cable is not connected to the port.

Warning Invisible laser radiation may be emitted from disconnected fibers or connectors. Do not sta
view directly with optical instruments. Statement 1051

Warning Ultimate disposal of this product should be handled according to all national laws and regu
1040

Warning Pluggable optical modules comply with IEC 60825-1 Ed. 3 and 21 CFR 1040.10 and 1040
exception for conformance with IEC 60825-1 Ed. 3 as described in Laser Notice No. 56, da
Statement 1255.

Warning Invisible laser radiation may be emitted from the end of the unterminated fiber cable or cor
view directly with optical instruments. Viewing the laser output with certain optical instrume
eye loupes, magnifiers, and microscopes) within a distance of 100 mm may pose an eye h
1056

To install an SFP module in your device, perform these steps: