



Cisco Catalyst 8200 Series Edge uCPE Hardware Installation Guide

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CHAPTER 1

Overview of the Cisco Catalyst 8200 Series Edge uCPE

The Cisco Catalyst 8200 Series Edge uCPE combines routing, switching, storage, processing, and a host of other computing and networking activities into a compact one Rack Unit (RU) box. This

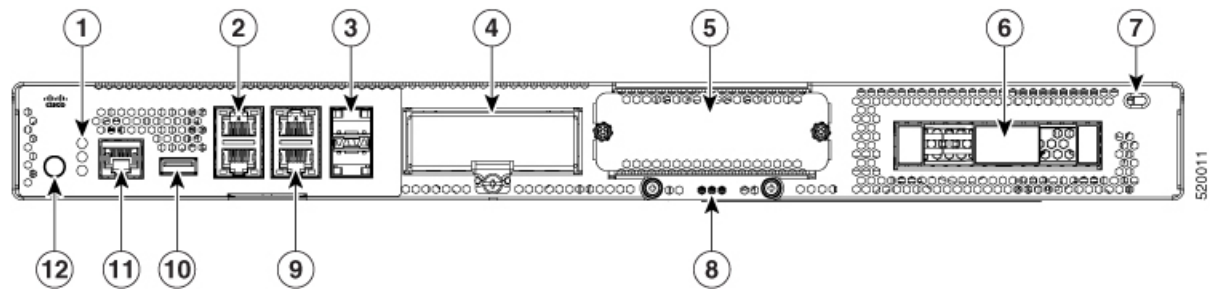
Cisco Catalyst 8200 Series Edge uCPE achieves this goal by providing the infrastructure to deploy virtualized network functions while at the same time acting as a server that addresses processing, workload, and storage challenges.

- [Cisco Catalyst 8200 Series Edge uCPE Chassis](#), on page 1
- [Location of Labels on Cisco Catalyst 8200 Series Edge uCPE](#), on page 3
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Cisco Catalyst 8200 Series Edge uCPE Chassis

Chassis - Front Panel

Figure 1: Front Panel of Cisco Catalyst 8200 Series Edge uCPE

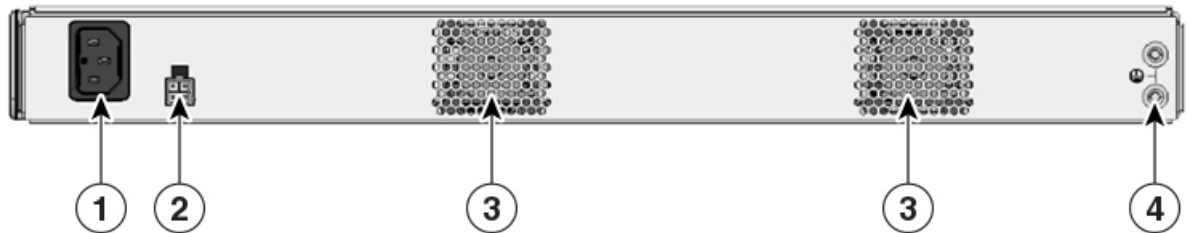


1.	System Status LEDs	2	Front panel Gigabit Ethernet ports GE0/0-1 with LED (Copper)
3	Front panel Gigabit Ethernet ports GE0/4-5 (SFP)	4	LTE PIM Module Slot

5	Network Interface Module (NIM) Slot	6	Drive bay 0
7	Kensington Lock	8	M.2 Storage Module
9	Front panel Gigabit Ethernet ports GE0/2-3 with LED (Copper)	10	USB
11	Serial Console Port	12	Power Button

Chassis - Bezel Side

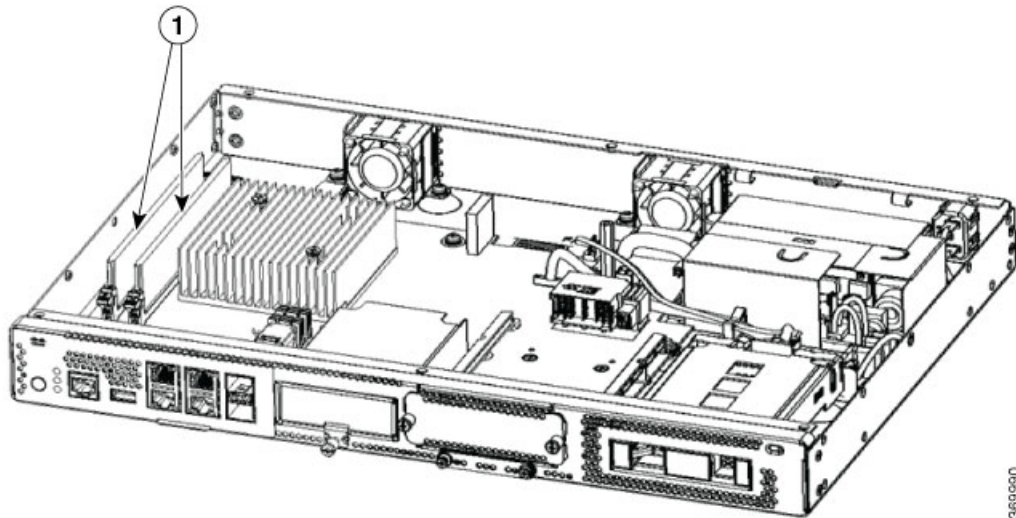
Figure 2: Bezel View of Cisco Catalyst 8200 Series Edge uCPE



1.	Power socket	2	PoE socket
3	Fan	4	Ground lug securing location

Chassis - Internal

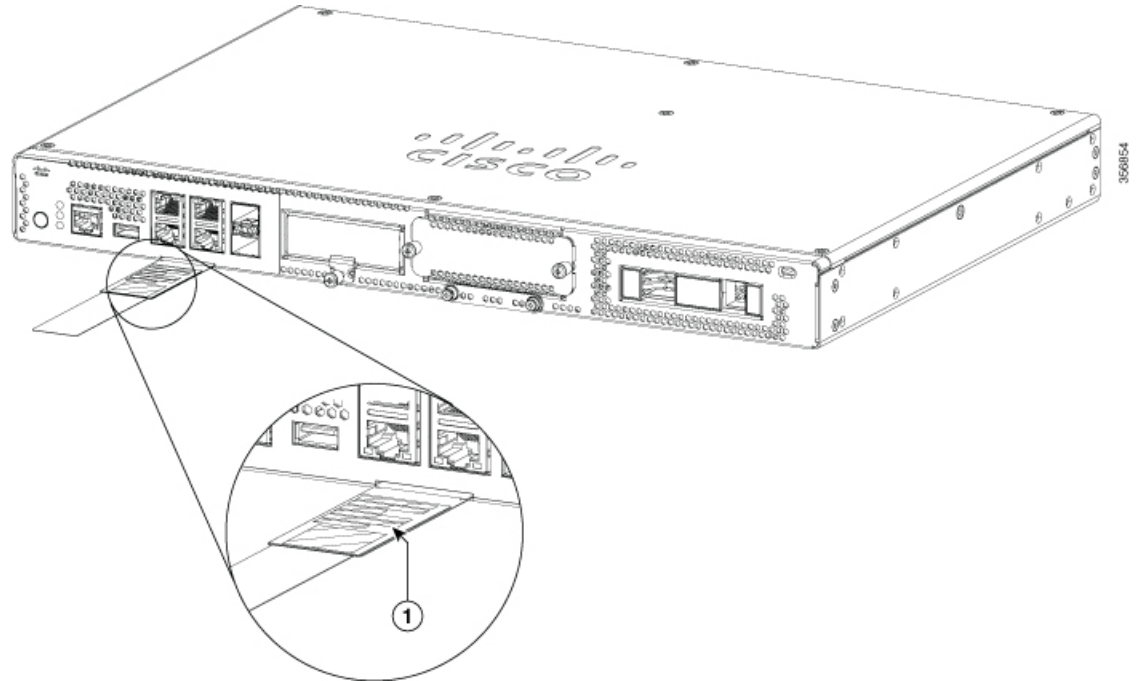
Figure 3: Internal View of Cisco Catalyst 8200 Series Edge uCPE



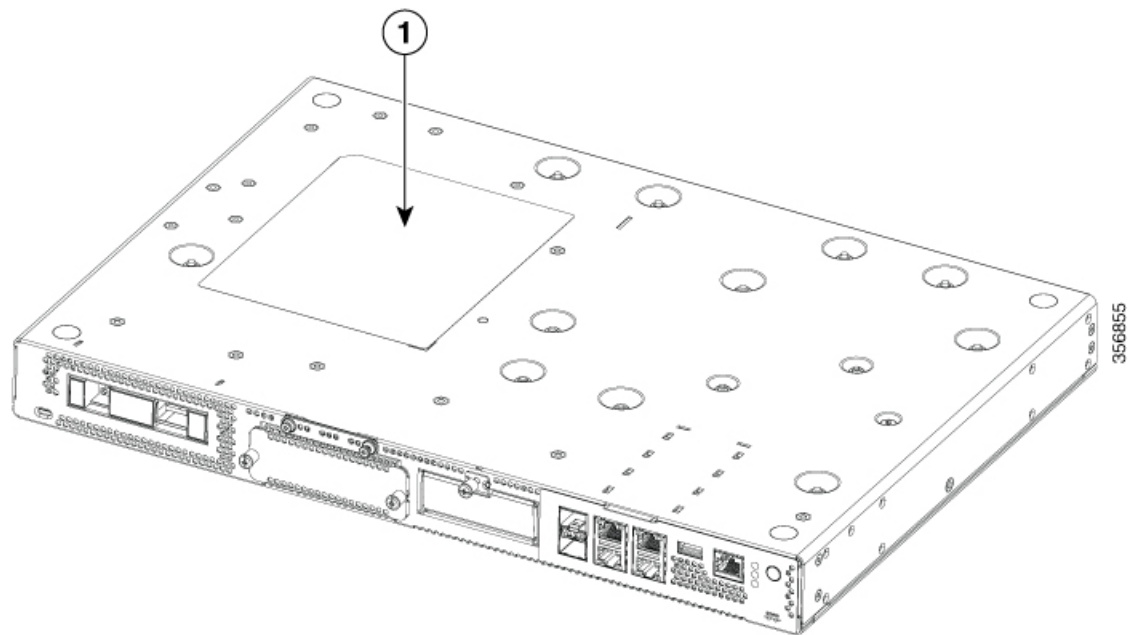
1.	DIMM Slots		
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Location of Labels on Cisco Catalyst 8200 Series Edge uCPE

The figure below shows the location of the labels on the Cisco Catalyst 8200 Series Edge uCPE. Labels are located at the same location on all the Cisco Catalyst 8200 Series Edge uCPE.



1	Product labels location
---	-------------------------



1	Compliance Label Location
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Hardware Features - Standard

- **USB 2.0 and 3.0 port:** You can use this port to connect a mouse, keyboard, or any other USB device. Using a USB hub, you can connect more than one USB device to this port. Because this port is backward compatible, you can also use an older version of USB devices on this port.
- **Front panel Gigabit Ethernet ports:** There are four Copper RJ45 ports, and two fiber optic ports.



Warning For connections outside the building where the equipment is installed, the following ports must be connected through an approved network termination unit with integral circuit protection: Gigabit Ethernet (GE). Statement 1044.

- **M.2 storage module:** This is a high capacity storage component. The OS is installable in this module. The storage capacity of this module is upgradeable. The storage capacity available for this module is 32 GB for USB type M.2 and starting from NFVIS software release 17.6.1, the storage capacity is 75 GB for USB type M.2. The storage capacity is 600 GB for NVMe type M.2 or 2 TB for NVME type M.2.
- **Hard Disk Drive (HDD):** You can install an HDD in a 2.5 inch HDD slot.

The types of supported disks are:

- 1 TB HDD SATA
- 2 TB HDD SATA
- 480 GB SSD SATA
- 960 GB SSD SATA
- 4 TB SSD SATA

- **Dual In-Line Memory Modules (DIMMs):** Stores the running configuration and routing tables and is used for packet buffering by the network interfaces.



Note The minimum memory supported is 8 GB and maximum memory is 64 GB.

- **Network Interface Module (NIM):** You can install a NIM in the NIM slot. Similarly when not needed, you can remove the NIM from the NIM module. The device supports only one NIM at a time.
- **Pluggable Interface Module (PIM):** You can install a PIM in the PIM slot.

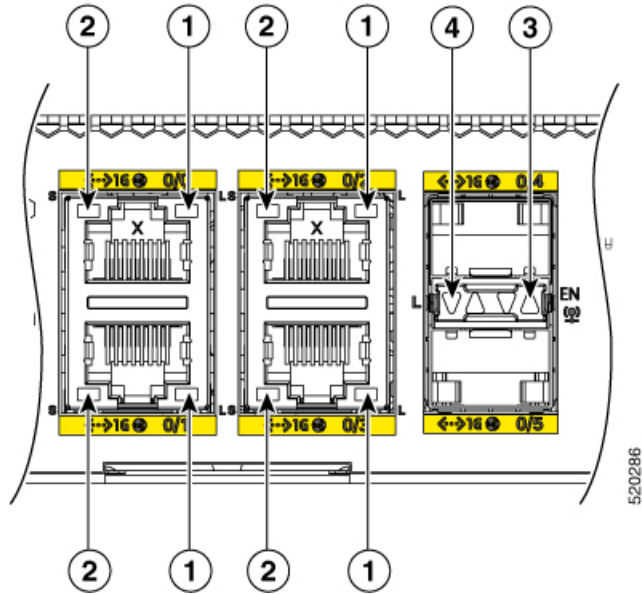


Note For proper thermal functioning of the system, all module slots (PIM, NIM, M.2 and 2.5" HDD) that do not have a functional module installed must be provisioned with a blank filler.

LEDs for Gigabit Ethernet Ports

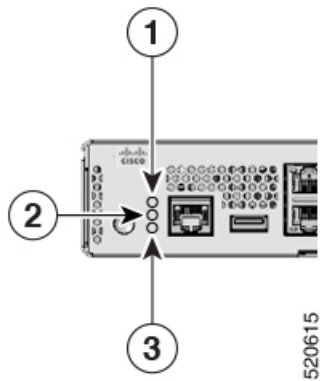
The front panel Gigabit Ethernet ports has six ports: four RJ45 ports and two SFP ports.

Figure 4: LEDs for Gigabit Ethernet Ports



1	RJ-45 Management Ethernet Link LED	2	RJ-45 Management Ethernet Speed LED
3	SFP Port 0/4 and 0/5 - Enable LED	4	SFP Port 0/4 and 0/5 Link LEDs

Figure 5: Front (I/O) Side LED Status



1	PSU	2	Status
3	ENV		

LED Label	Color	Behavior
PSU	Green Amber	Power Supply Status Off: The system is powered off Green: All installed PSUs are operating correctly
STATUS	Green Amber	System Status Solid green: System operates normally Amber: BIOS has completed booting Blinking amber: BIOS is booting. Alternating green & amber: The system has failed a hardware integrity check. Off: System is not out of reset or BIOS image is not loadable.
ENV	Green Amber	Environmental Status Green: All temperature sensors and fans in the system are within acceptable range. Amber: One or more temperature sensors in the system are outside the acceptable range. Blinking Amber: One or more fans in the system are outside the acceptable range. Off: Fans & Temperature are not being monitored.
LINK	Green	RJ-45 Management Ethernet Link LED Off: No link Green: Ethernet cable present and link established with other side

LED Label	Color	Behavior
SPEED	Green	RJ-45 Management Ethernet Speed LED Off: No Link Blinking Green: blink frequency indicates port speed: <ul style="list-style-type: none"> • 1 blink – 10Mbps link speed • 2 blinks – 100Mbps link speed • 3 blinks – 1000Mbps link speed
SFP EN	Green Amber	SFP- Enable LED Off: Not present Green: The SFP is supported and no faults. Amber: The SFP is not supported or is in a faulty state
SFP LINK	Green	SFP Port 0/4 and 0/5 Link LEDs Off: No Link (or not present) Green: Link established
HDD STATUS	Amber	Off: HDD is OK (or not present). On: HDD is in a failed state.
HDD ACTIVITY	Green	Off: HDD is not present. On: HDD is present, No activity. Blinking: HDD is present, Activity.

If both HDD Status & HDD Activity LEDs are blinking then the Locate function is active.



Warning

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





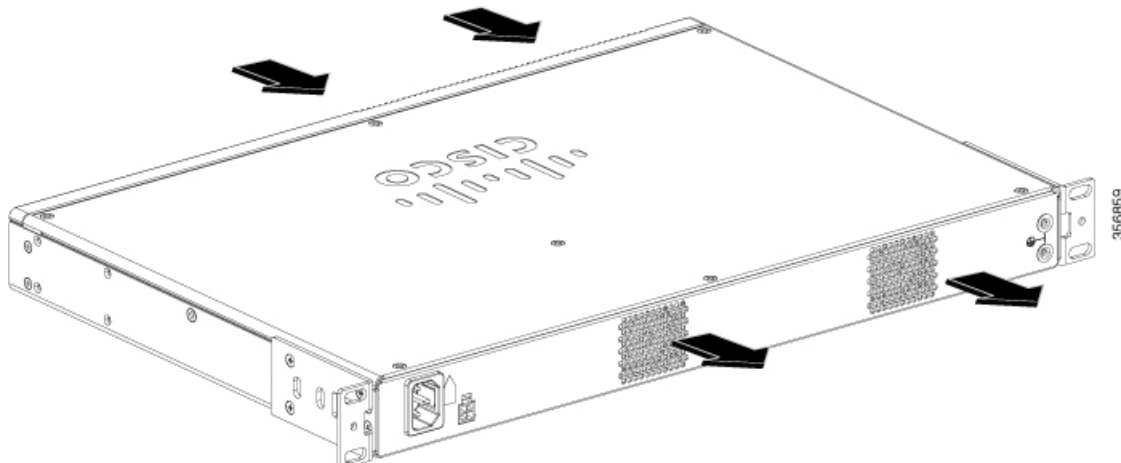
Warning

Invisible laser radiation may be emitted from the end of the unterminated fiber cable or connector. Do not view directly with optical instruments. Viewing the laser output with certain optical instruments (for example, eye loupes, magnifiers, and microscopes) within a distance of 100 mm may pose an eye hazard. Statement 1056

Fiber type and Core diameter (µm)	Wavelength (nm)	Max. Power (mW)	E
SM 11	1200 - 1400	39 - 50	
MM 62.5	1200 - 1400	150	
MM 50	1200 - 1400	135	
SM 11	1400 - 1600	112 - 145	

Fans, Ventilation, and Airflow

The chassis temperature is regulated with internal fans. An onboard temperature sensor controls the fan speed. The fans are always on when the device is powered on. Under all conditions, the fans operate at the slowest speed possible to conserve power and reduce noise. When necessary, the fans operate at higher speeds under conditions of higher ambient temperature.





CHAPTER 2

Preparing for Installation

- [Safety Recommendations and Warnings, on page 9](#)
- [Safety with Electricity, on page 10](#)
- [Site Requirements, on page 11](#)
- [Mounting Requirements, on page 12](#)
- [Power Guidelines and Requirements, on page 13](#)
- [Network Cabling Specification, on page 15](#)
- [Required Tools and Equipment, on page 15](#)

Safety Recommendations and Warnings

Review the safety warnings listed in Regulatory Compliance and Safety Information for the Cisco Catalyst 8200 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. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device. Statement 1071



Warning

Read the installation instructions before you connect the system to its power source. Statement 1004



Warning

Ultimate disposal of this product should be handled according to all national laws and regulations. Statement 1040



Warning

Installation of the equipment must comply with local and national electrical codes. Statement 1074

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

- Ensure that the chassis is electrically connected to ground.
- Wear an ESD-preventive wrist strap, ensuring that it makes good skin contact. Connect the clip to an unpainted surface of the chassis frame to channel unwanted ESD voltages safely to ground. To guard 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. It should be between 1 and 10 megohms (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 accident 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 extension 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 appropriate action.

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

- Never install telephone wiring during a lightning storm.
- Never install telephone jacks in wet locations unless the jack is specifically designed for it.

- Never touch uninsulated telephone wires or terminals unless the telephone line is disconnected at the network interface.
- Use caution when installing or modifying telephone lines.
- Remove power cables from all installed power supplies before opening the chassis.

Always follow these electrostatic discharge (ESD) prevention procedures when removing and replacing 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 clip to an unpainted surface of the chassis frame to channel unwanted ESD voltages safely to ground. To guard 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 strap. It should be between 1 and 10 megohms (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 or tripped 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 component damage.



Warning

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



Warning

To prevent the system from overheating, do not operate it in an area that exceeds the maximum recommended ambient temperature of: 40 degrees C. Statement 1047

Temperature, humidity, altitude, and vibration can affect the performance and reliability of the chassis. After installation, ensure that the site maintains the environmental characteristics shown in this table:

Environmental Characteristic	Minimum	Maximum
Steady State Operating	0 degree C	40 degree C (40 degrees C at 10,000 feet)

Environmental Characteristic	Minimum	Maximum
Storage	-20 degrees C	+70 degrees C
Humidity operating (noncondensing)	10%	90%
Humidity nonoperating (noncondensing)	5%	95%
Altitude operating: over allowable temperature range (0 to 40 degrees C)	-500 feet	10,000 feet
Altitude, nonoperating: over allowable temperature range	0 feet	15,000 feet
Thermal shock non-operating with change over time of 3 minute	-25 degrees C	+70 degrees C
Thermal Shock - Operating at 2.5 degree C per minute	0 degrees C	+40 degrees C

Mounting Requirements

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

Characteristic	Measurement
Height	1.73 inches (4.39 cm) — 1RU rack-mount
Width	17.25 inches (43.815 cm)
Depth	11.8 inches (29.972cm)
Weight	10.80 lbs. (4.9 kg)

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

The Catalyst 8200 uCPE can be:

- Mounted on a desktop
- Installed in a rack
- Wall-mounted

The location of your device and the layout of your equipment rack or wiring room are extremely important considerations for proper operation. Equipment placed too close together, inadequate ventilation, and inaccessible panels can cause malfunctions and shutdowns, and can make maintenance difficult. Plan for access to both front and rear panels of the device.

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 device generates heat. An enclosed rack should have louvered sides and a fan to provide cooling air. Heat generated by equipment near the bottom of the rack can be drawn upward into the intake ports of the equipment above it.
- When mounting a chassis in an open rack, ensure that the rack frame does not block the intake or exhaust ports. If the chassis is installed on slides, check the position of the chassis when it is seated in the rack.

Power Guidelines and Requirements

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

The AC power supply supports either 110V or 220V operation. All units include a 6-foot (1.8-meter) electrical power cord.



Warning

When installing the product, please use the provided or designated connection cables/power cables/AC adaptors/batteries. Using any other cables/adaptors could cause a malfunction or a fire. Electrical Appliance and Material Safety Law prohibits the use of UL-certified cables (that have the "UL" or "CSA" shown on the cord), not regulated with the subject law by showing "PSE" on the cord, for any other electrical devices than 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 cables/AC adaptors. Statement 407.

製品使用における

シスコ製品をご使用になる前に安全上

<http://www.cisco.com/web/JP/tech>

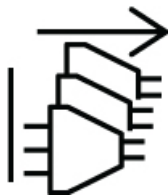
接続ケーブル、電源コード、ACアダプタ、
品をご使用ください。添付品・指定品以外
の原因となります。また、電気用品安全法
ネクタに表記)でなくUL適合品 (ULまたは
弊社が指定する製品以外の電気機器には



Warning To reduce risk of fire, use copper conductors only. Statement 1025.



Warning This unit might have more than one power supply connection. To reduce risk of electric shock, all connections 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 equipment to connect a port to an external network

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



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



CHAPTER 3

Installing the Device

- [Unpacking the Device, on page 17](#)
- [Installing the Cisco Catalyst 8200 Series Edge uCPE, on page 17](#)
- [Grounding the Chassis, on page 23](#)
- [Powering On the Server, on page 23](#)
- [Initial Server Setup, on page 24](#)

Unpacking the Device

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

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

Installing the Cisco Catalyst 8200 Series Edge uCPE

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



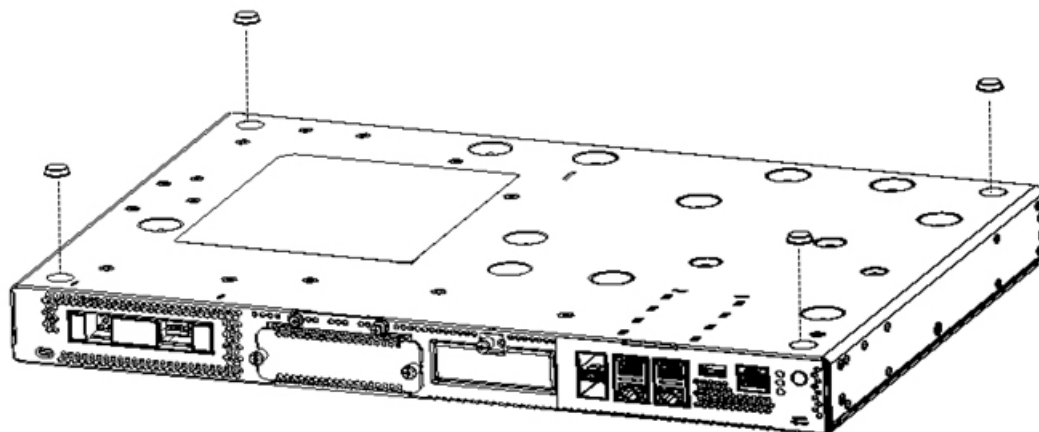
Warning

Only trained and qualified personnel should be allowed to install, replace, or service this equipment. Statement 1030

You can place the router on a desktop, bench top, or shelf.

Desktop-Mounting the Chassis

The Catalyst 8200 uCPE has circular markings on the bottom of the chassis for rubber feet. Apply the rubber feet when installing the router on horizontal surface (desk or shelf).



Rack-Mounting the Chassis

The Catalyst 8200 uCPE can be installed in 19-inch (48.26-cm) racks. You can order the standard brackets for mounting the chassis in a 19-inch EIA rack.

The mounting ears for the device are designed for #12-24 UNC screws for rack mounting.



Warning

To prevent airflow restriction, allow clearance around the ventilation openings to be at least: 1-inch (25.4-mm) Statement 1076

You can rack-mount the device in the following ways:

- Front mounting—Brackets attached at the front of the chassis with the front panel facing forward
- Back mounting—Brackets attached at the back of the chassis with the back panel facing forward

Attaching Brackets to the Chassis

Attach one mounting bracket to each side of the device as shown in following figures. You need four screws to attach each bracket to the device. Total eight screws are required to attach both brackets to the device. Use the screws provided with the mounting kit to attach the screws to the device.

Figure 6: Bracket Installation for Front Mounting

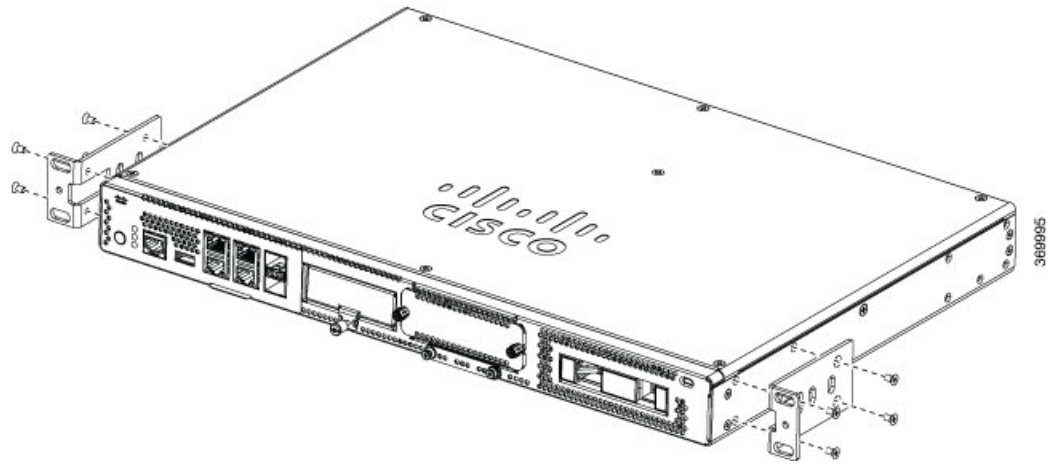
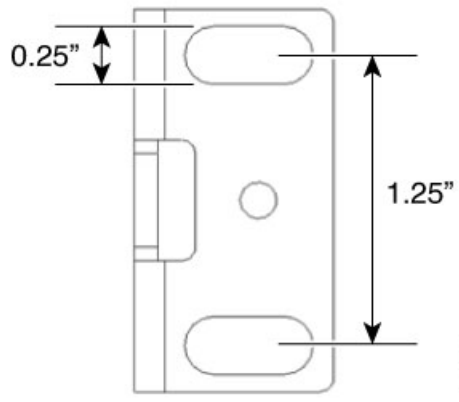
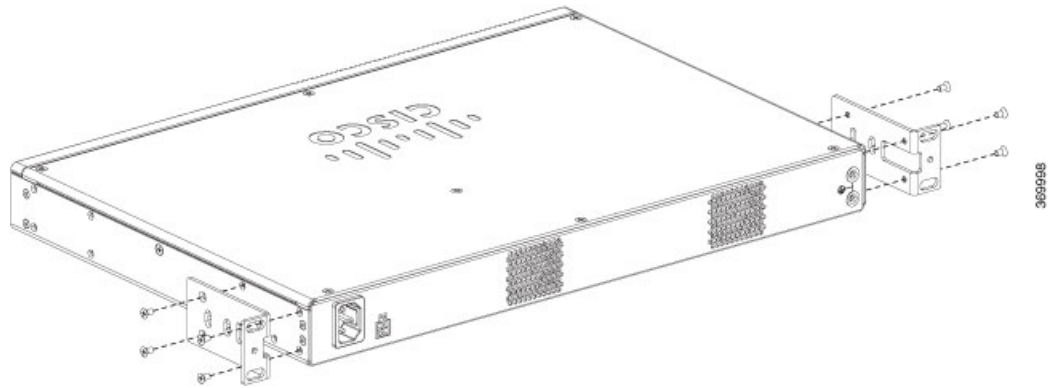


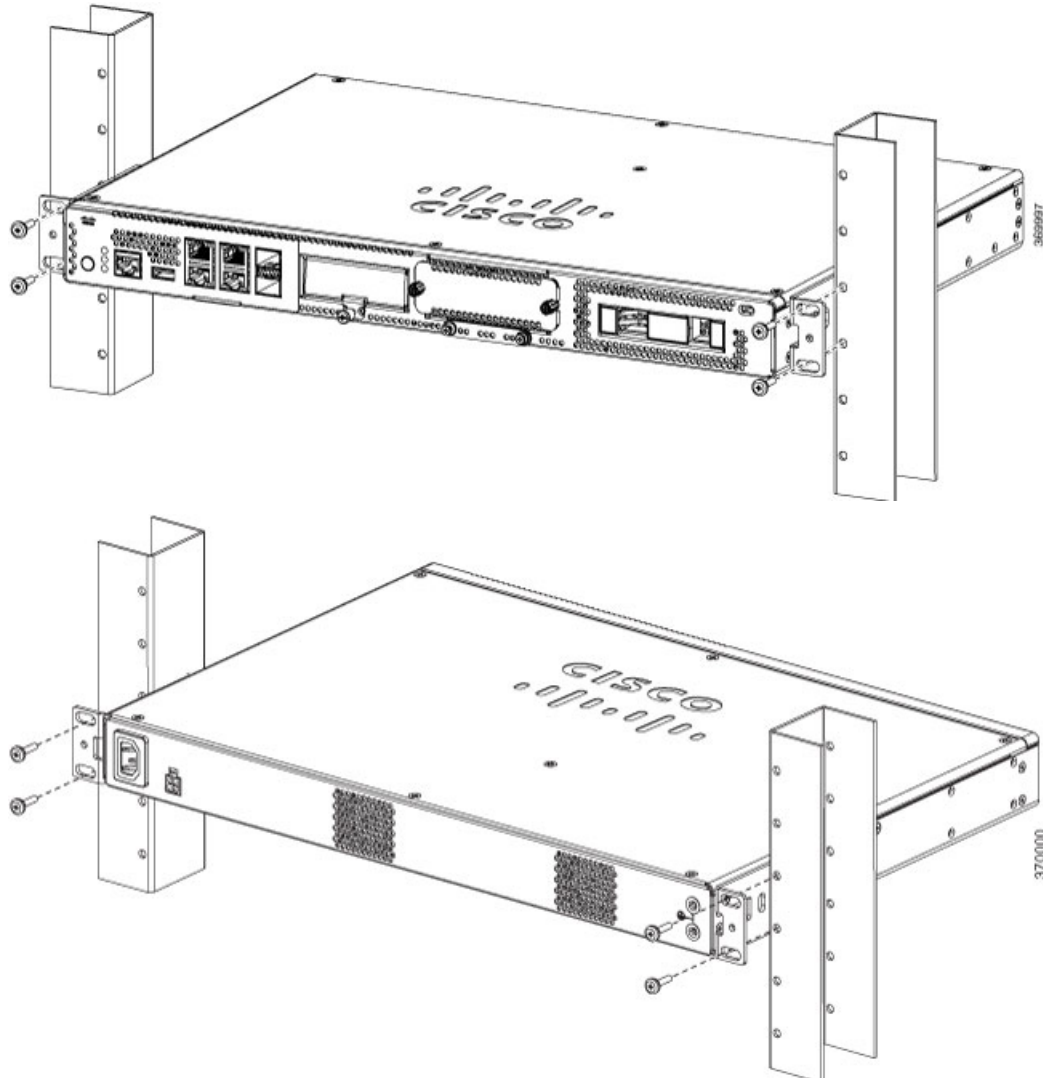
Figure 7: Bracket Installation for Back Mounting



Mounting the device in a Rack

After you attach the brackets to the device, install the chassis on the rack as shown in following figures. You need two screws to attach each bracket to the rack. Total four screws are required to attach the device to the rack. The screws for attaching the device to the rack are not provided with the kit.

Figure 8: Mounting the Chassis on the Rack - Front and Back



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

Wall-Mounting the Chassis

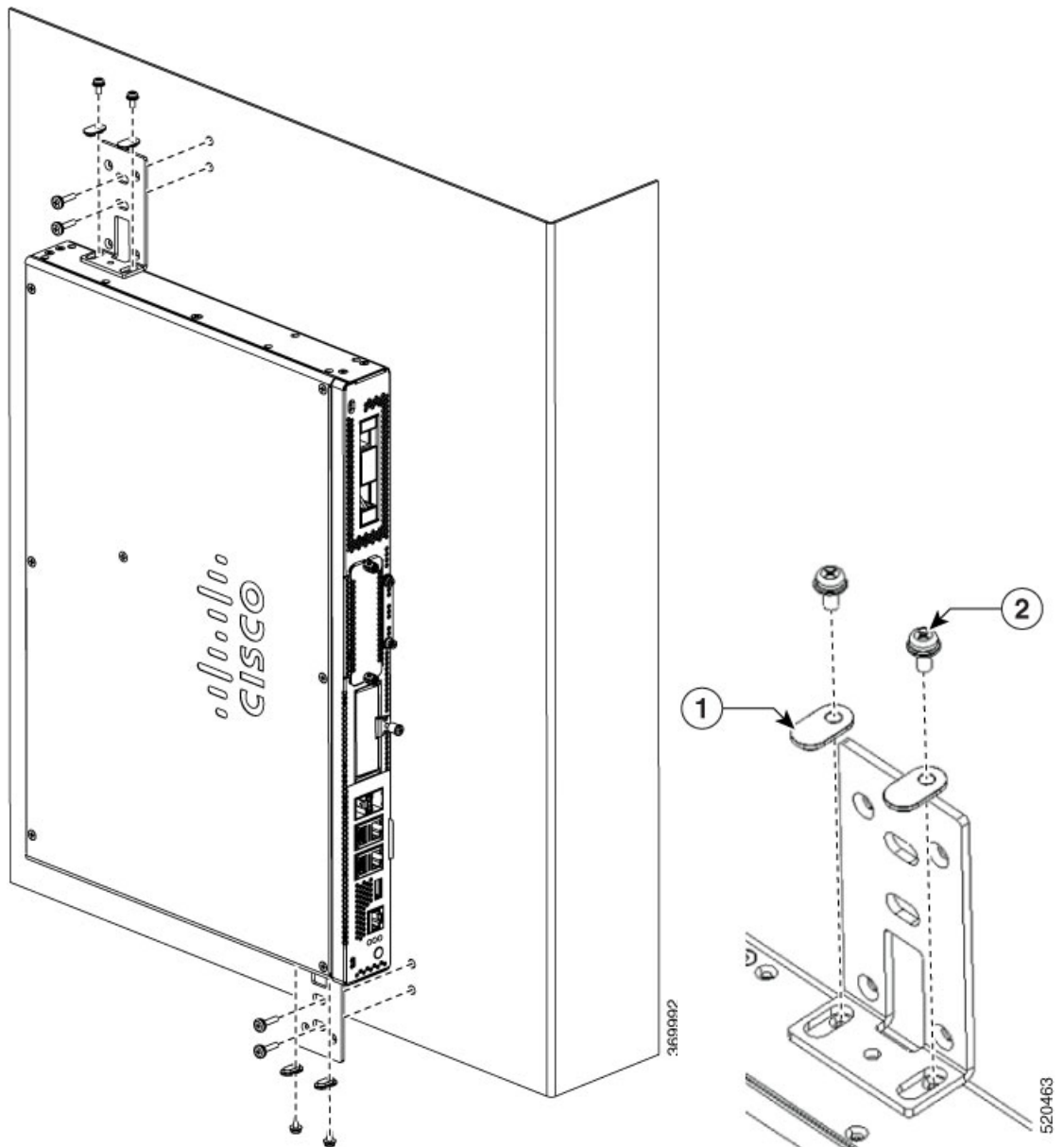
These are the steps to wall mount the chassis:

1. Attach the brackets to the device using the screws provided with the mounting kit. You can order the wall mounting kit to mount the chassis on a wall.

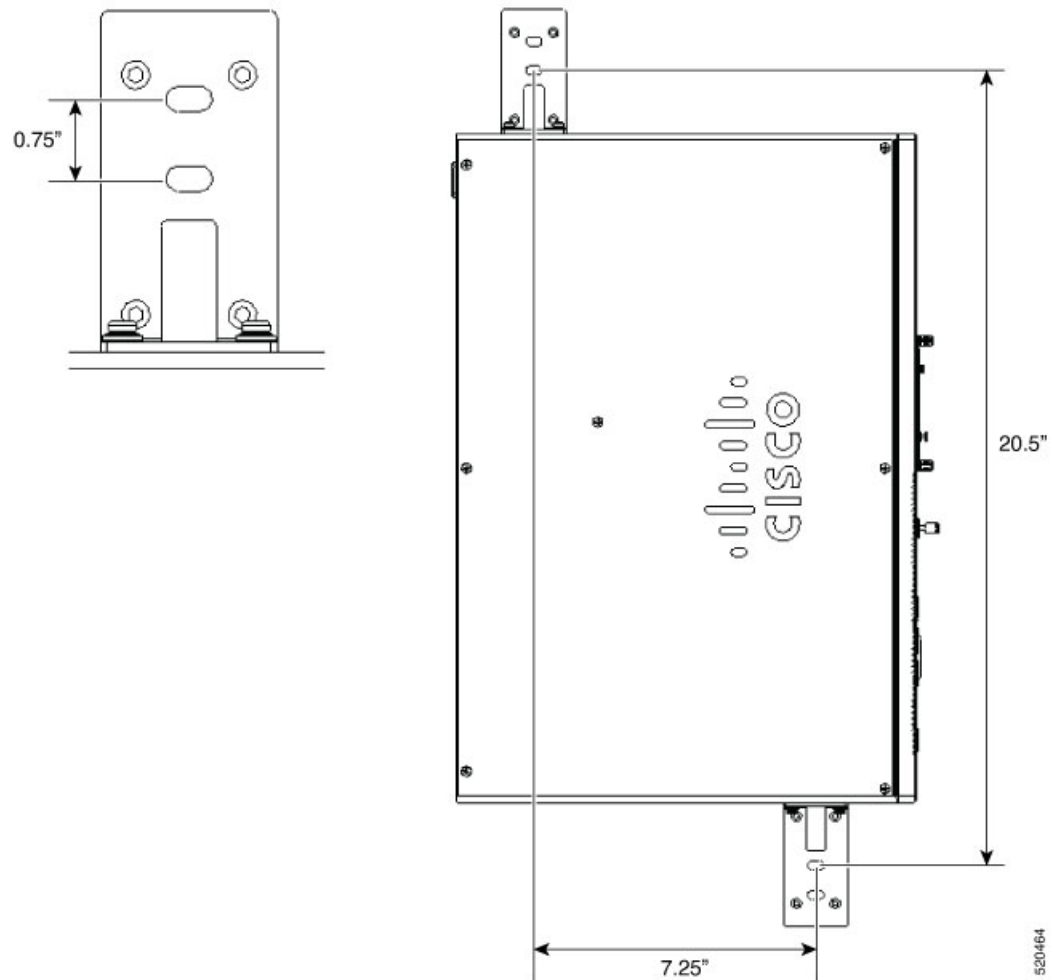


Note The wall-mounting kit is different from the rack-mounting kit.

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



- | | |
|---|--|
| 1 | Bracket slot spacer for screw. Orient spacer in slot as shown. |
|---|--|



- 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. Depending on the type of wall (wood, brick, stone etc), use appropriate screws or anchors to fix the device to the wall.



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

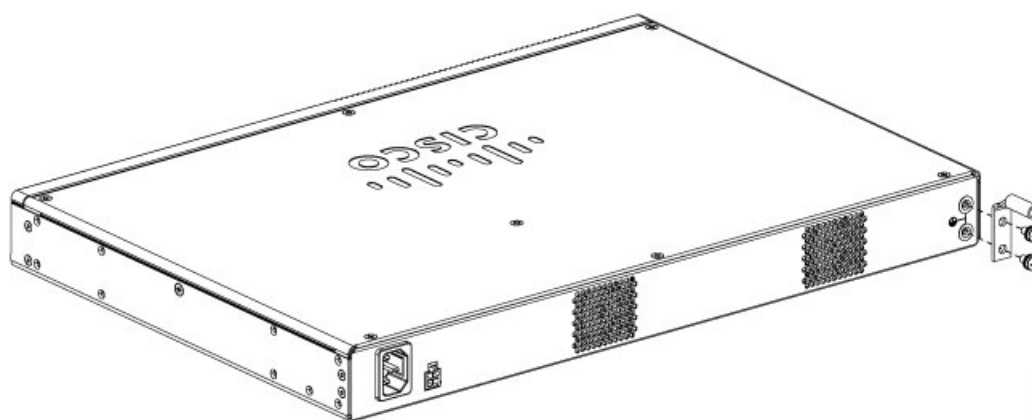
Grounding the Chassis


Warning

This equipment must be grounded. Never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician 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 connection must always be made first and disconnected last. Statement 1046



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

Before you begin

- Connect the chassis to the earth ground; the ground wire must be installed in accordance with local electrical safety standards.
- For grounding, use size 6 AWG copper wire and the ground lug provided in the accessory kit.

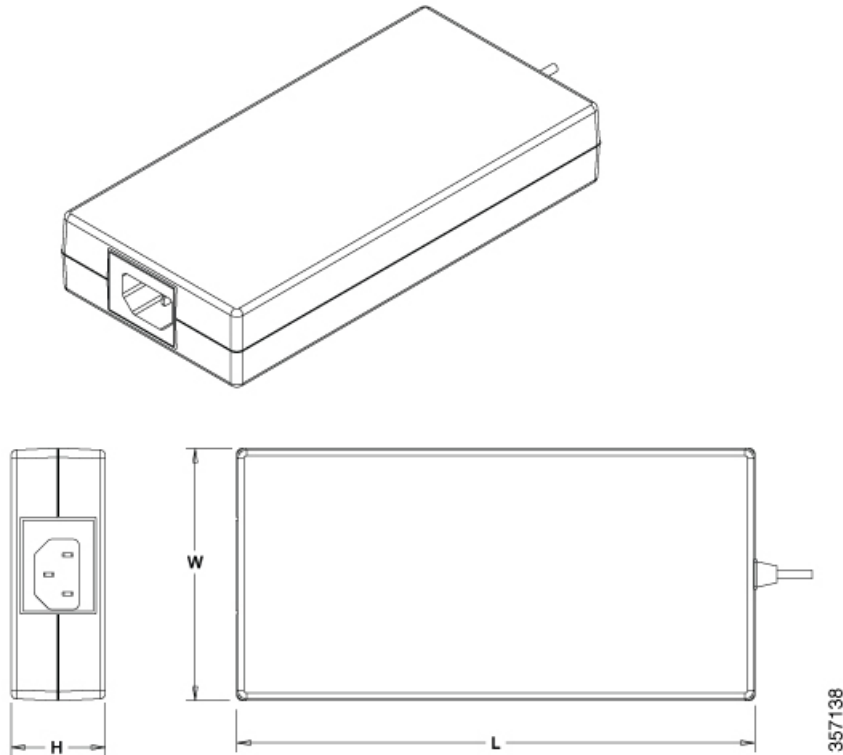
1. Strip one end of the ground wire to the length required for the groundlug.
2. Crimp the ground wire to the ground lug using a crimp tool of the appropriate size (7/8" strip length).
3. Attach the ground lug to the chassis as shown in the figure. Use the screws provided along with the ground lug to attach the lug to the device.

Powering On the Server

An external POE supply may be ordered if required. The POE supply can be of different sizes. The table below shows the physical parameters depending on the supplier.

PSU	Delta PSU	FSP PSU

Main Part Dimensions	L-200 * W-100 * H-43 mm	L-177 * W-86 * H-32.2 mm
Weight	1.015 KG	0.575 KG



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.

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 commands.



CHAPTER 4

Installing and Upgrading Field Replaceable Units

- [Install and Remove Small Factor Pluggable, on page 25](#)
- [Removing and Replacing the Chassis Cover, on page 27](#)
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Install and Remove Small Factor Pluggable

Laser Safety Guidelines

Optical Small-Form Pluggable (SFPs) use a small laser to generate the fiber-optic signal. Keep the optical 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 stare into beams or view directly with optical instruments. Statement 1051



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



Warning Pluggable optical modules comply with IEC 60825-1 Ed. 3 and 21 CFR 1040.10 and 1040.11 with or without exception for conformance with IEC 60825-1 Ed. 3 as described in Laser Notice No. 56, dated May 8, 2019. Statement 1255.

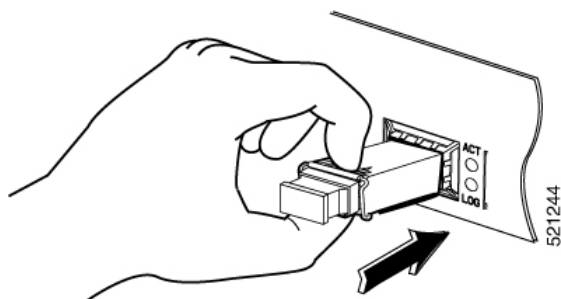
To install an SFP module in your device, perform these steps:

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

Step 2 Slide the SFP into the device connector until it locks into position

Tip If the SFP uses a bale-clasp latch (see Laser Safety Guidelines section, the handle should be on top of the SFP module.

Figure 9: Install a Small-Form Pluggable Module



Caution Do not remove the optical port plugs from the SFP until you are ready to connect cabling.

Step 3 Connect the network cable to the SFP module.

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.

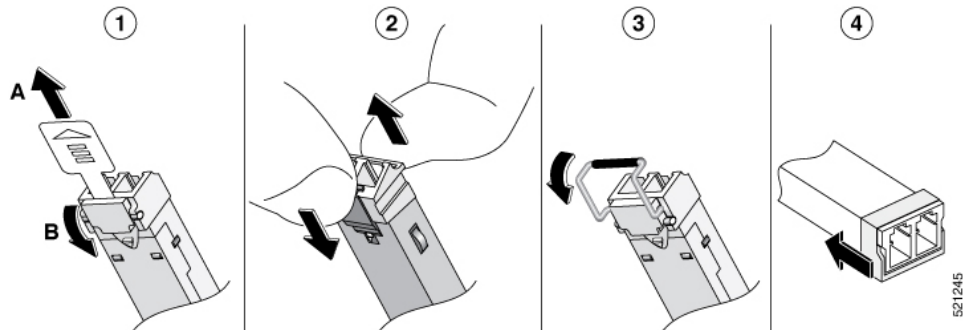
Warning Invisible laser radiation may be emitted from disconnected fibers or connectors. Do not stare into beams or view directly with optical instruments. Statement 1051

Caution The latching mechanism used on many SFPs locks the SFP into place when cables are connected. Do not 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 linked to SFP model or technology type. For information on the SFP technology type and model, see the label on the side of the SFP.

Figure 10: Disconnecting SFP Latch Mechanisms



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

Tip Use a pen, screwdriver, or other small straight tool to gently release a bale-clasp handle if you cannot reach it with your fingers.

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

Removing and Replacing the Chassis Cover

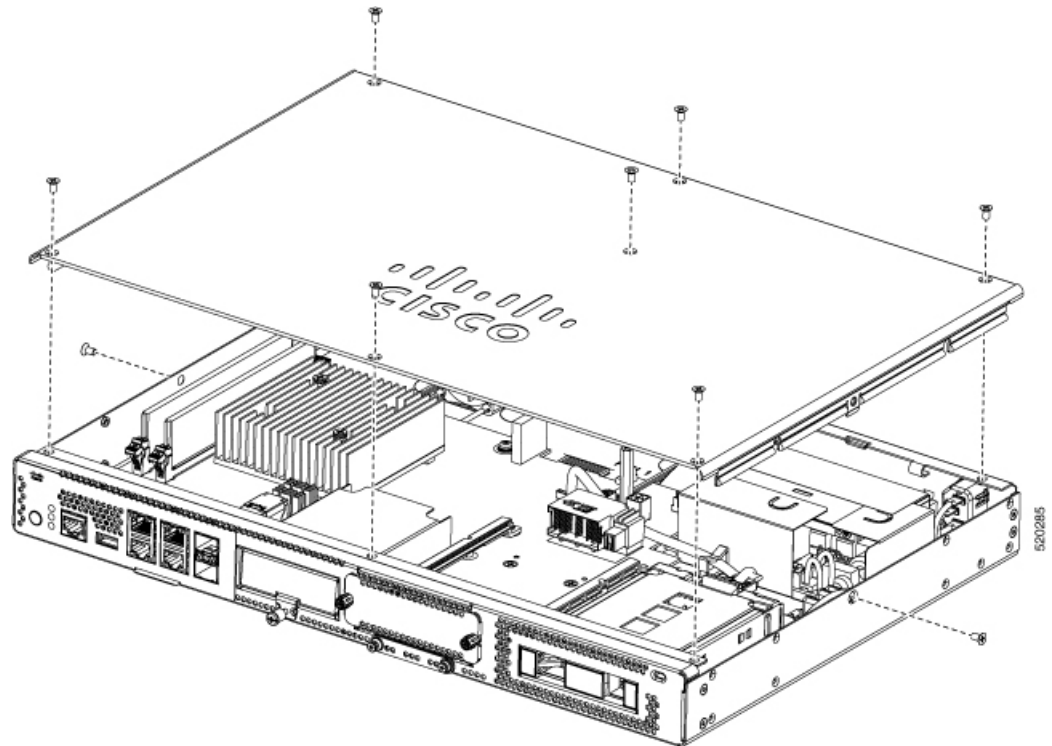


Warning Only trained and qualified personnel should be allowed to install, replace, or service this equipment. Statement 1030

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 supplies.
2. Place the chassis on a flat surface.
3. Remove the screws at top of the chassis cover.
4. Remove one screw from each side of the device as shown in the following figure.

Figure 11: Removing the Chassis Cover



- Lift the chassis cover after you have removed all the screws.

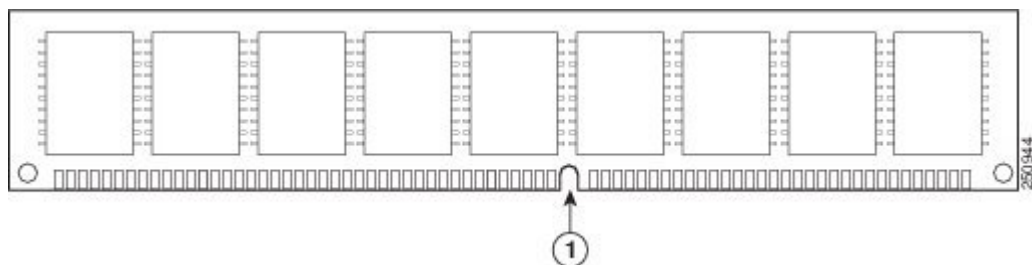


Note To replace the chassis cover, place the cover evenly on the top of the device and use the screws to secure it to the device.

Installing a DIMM

There are two DDR4 DIMM slots. DIMMs have a polarization notch on the connecting edge to prevent incorrect insertion.

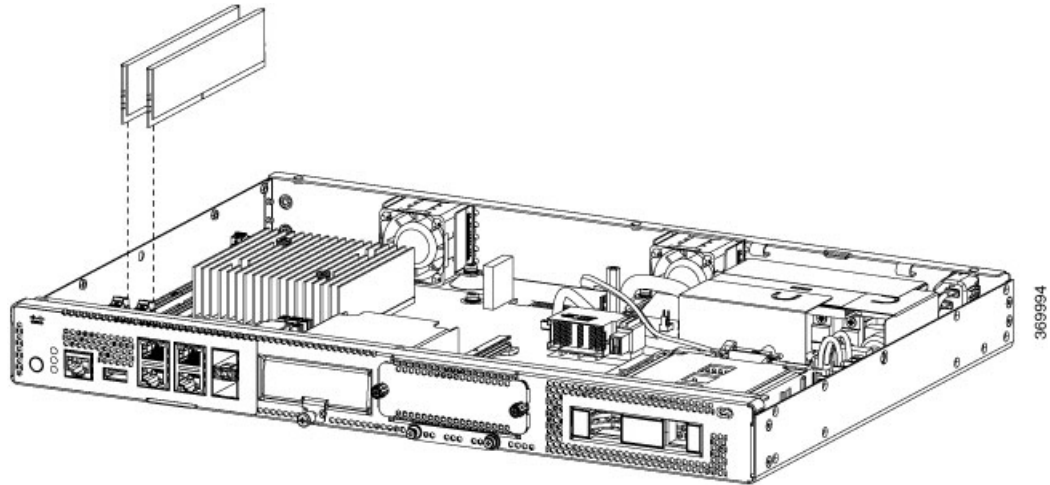
Figure 12: DIMM Showing Polarization Notch



1	Polarization Notch
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These are the steps to install a DIMM:

1. Remove the chassis cover.
2. Locate the DIMM slot on the device. There are two DIMM slots in the chassis and you can install the DIMM module on either of the slots.



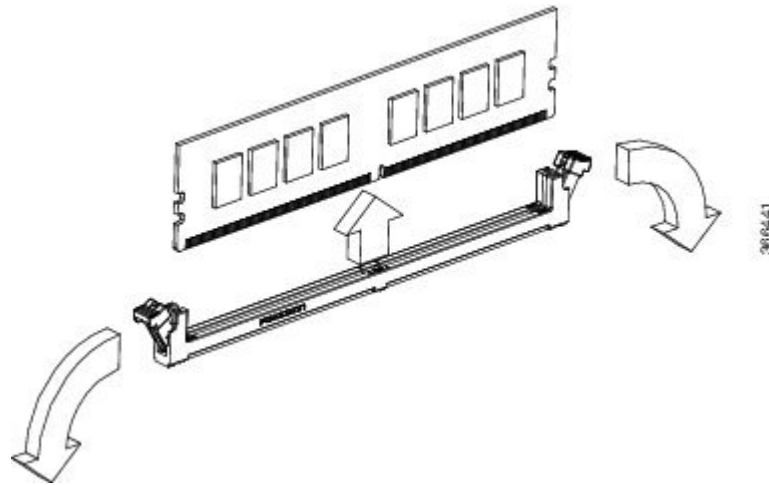
3. Make sure that both latches on the DIMM connector are in the open position.
4. Orient the DIMM so that the polarization notch lines up with the polarization key on the connector.
5. Insert the DIMM into the connector.
6. Replace the chassis cover.

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 [Cisco Catalyst 8200 Series Edge uCPE Chassis](#) section to identify and locate the DIMM module.
3. Pull the latches away from the DIMM at both ends to lift the DIMM slightly. Pull the DIMM out of the socket.

Figure 13: Removing a DIMM



4. Place the DIMM in an antistatic bag to protect it from ESD damage.
5. Replace the chassis cover.

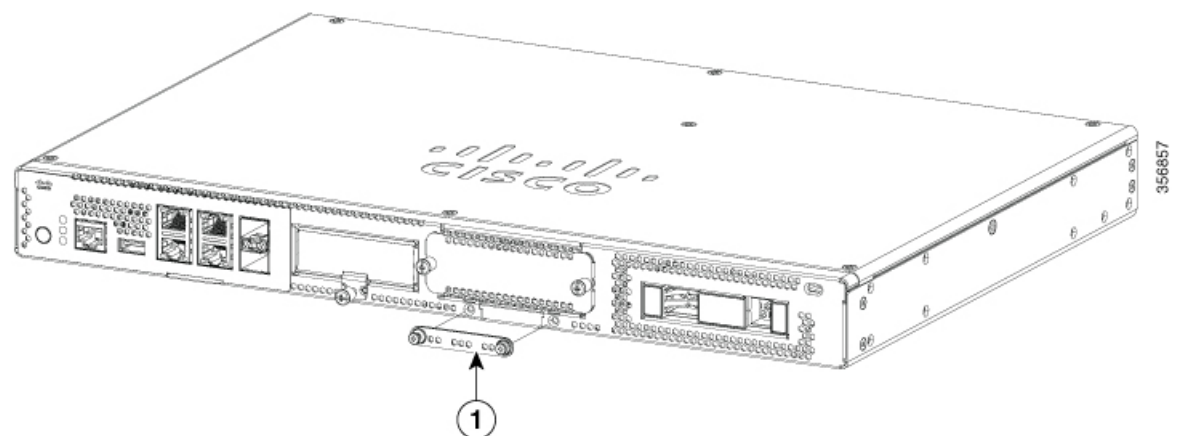
Installing the M.2 Storage Module

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

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 module.

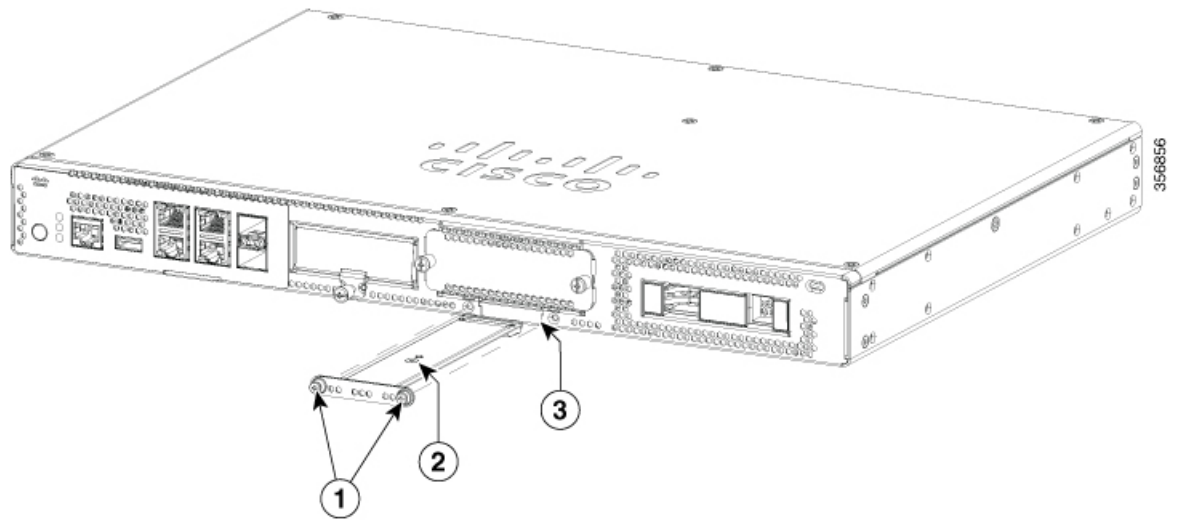
Figure 14: Blank M.2 Slot



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

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



1	Securing screws (torque 3.9-5.4 in-lbs)	2	M.2 module orientation with metal carrier on top, M.2 module underneath.
3	Chassis cutout prevents M.2 installation in wrong orientation.		

Installing and Removing a NIM

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.

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 damaged.

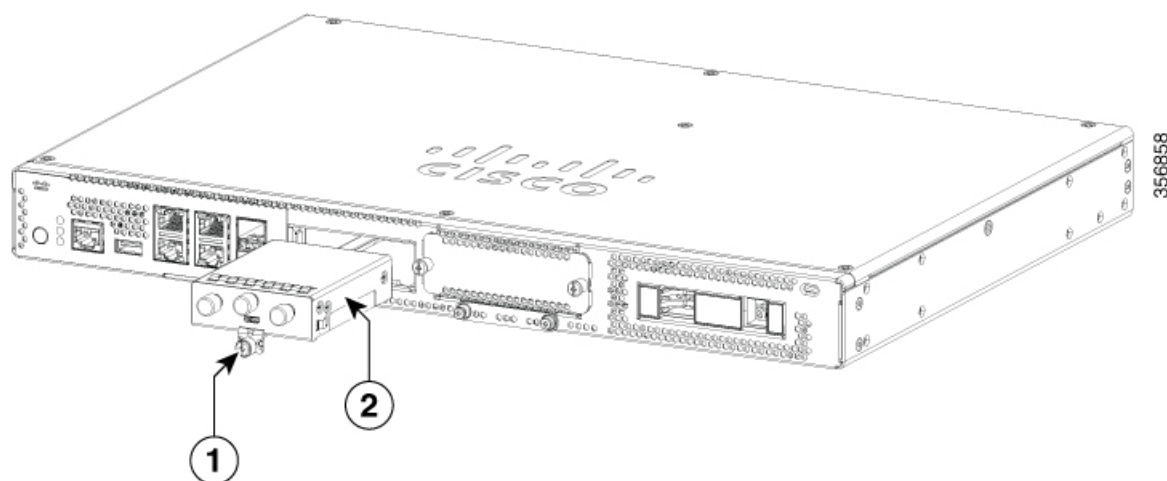
2. Locate the NIM slot on the front panel.
3. Loosen the screws that secure the NIM.
4. Gently pull out the NIM from the slot.

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



1	Securing screw	2	PIM Module
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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:

1. The drive bay is in the front panel of the device. The bay is closed with a cover if there are no drives in the slots.
2. Press the push button on the center of the cover and pull the cover out of the system to expose the slot.
3. Slide the drive into the slot.



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