



## Install and Connect

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This chapter describes how to install and connect the Cisco Catalyst C8300 Series Edge Platforms to LAN, WAN, and Voice networks.



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**Note** These routers are designed to boot up in less than 30 minutes, provided the neighboring devices are in fully operational state.

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The following sections provide the technical details:

- [Safety Warnings, on page 1](#)
- [What You Need to Know, on page 2](#)
- [Before You Begin, on page 2](#)
- [Unpack the Device, on page 2](#)
- [Install the Device, on page 2](#)
- [Connect Power to the Device, on page 19](#)
- [Connect to a Console Terminal or Modem, on page 20](#)
- [Install the Silicon Labs USB Device Driver, on page 22](#)
- [Connect WAN and LAN Interfaces, on page 23](#)

## Safety Warnings



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**Warning** To comply with Class A emissions requirements- shielded management Ethernet, CON, and AUX cables on the router must be used.

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**Warning** To comply with the Class A emissions requirements shielded twisted pair T1/E1 cables must be used for SPA-8-Port Channelized T1/E1 SPA (SPA-8XCHT1/E1) on the router. EN55022/CISPR22 Statement

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# What You Need to Know

## CLI Console Access

Use the USB or RJ-45 console port on the router to access the Cisco Internet Operating System (IOS-XE) and XE SD-WAN command line interface (CLI) on the router and perform configuration tasks. A terminal emulation program is required to establish communication between the router and a PC. See the Connect to a Console Terminal or Modem section in this document for instructions.



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**Note** A Microsoft Windows USB driver must be installed before you establish physical connectivity between the router and the PC.

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## Software Licenses

To use all the features on the router, you must purchase a software package. For more information on software licenses, see the “Smart Licensing” section of the Software Configuration Guide for the Cisco Catalyst C8300 Series Edge Platforms.

# Before You Begin

Before installing and connecting a Cisco Catalyst 8300 Series Edge Platforms, read the safety warnings and gather the following tools and equipment. For more information about the required tools and equipments, see the tools and equipment section.

# Unpack the Device

Do not unpack the device until you are ready to install it. If the final installation site will not be ready for some time, keep the chassis in its shipping container to prevent accidental damage. When you are ready to install the chassis, proceed with unpacking it.

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

# Install the Device

If you need to install Network Interface Modules (NIMs), Service Modules (SMs), Pluggable Interface Modules (PIMs), and Field-Replaceable Units (FRUs) on the C8300-1N1S-4T2X|6T and C8300-2N2S-4T2X|6T devices, you can install them either before or after you install the device. Ideally, you can install these modules when you have access to the I/O side of the device. Internal modules, memory cards and fan trays should be installed before rack-mounting the device.

You can install the device in one of the following ways:

- Set the chassis on a desktop
- Attach the chassis to the wall
- Mount the chassis on a rack



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**Note** C8300-2N2S-4T2X|6T support only rack mount, does not support wall mount or desktop mount options.

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**Warning** Before working on a system that has an on/off switch, turn OFF the power and unplug the power cord that is in the chassis. Statement 1

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**Caution** To prevent damage to the chassis, do not attempt to lift or tilt the chassis by holding it by the plastic panel on the front. Always hold the chassis by the sides of the metal body.

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## Mount the Chassis on a Desktop



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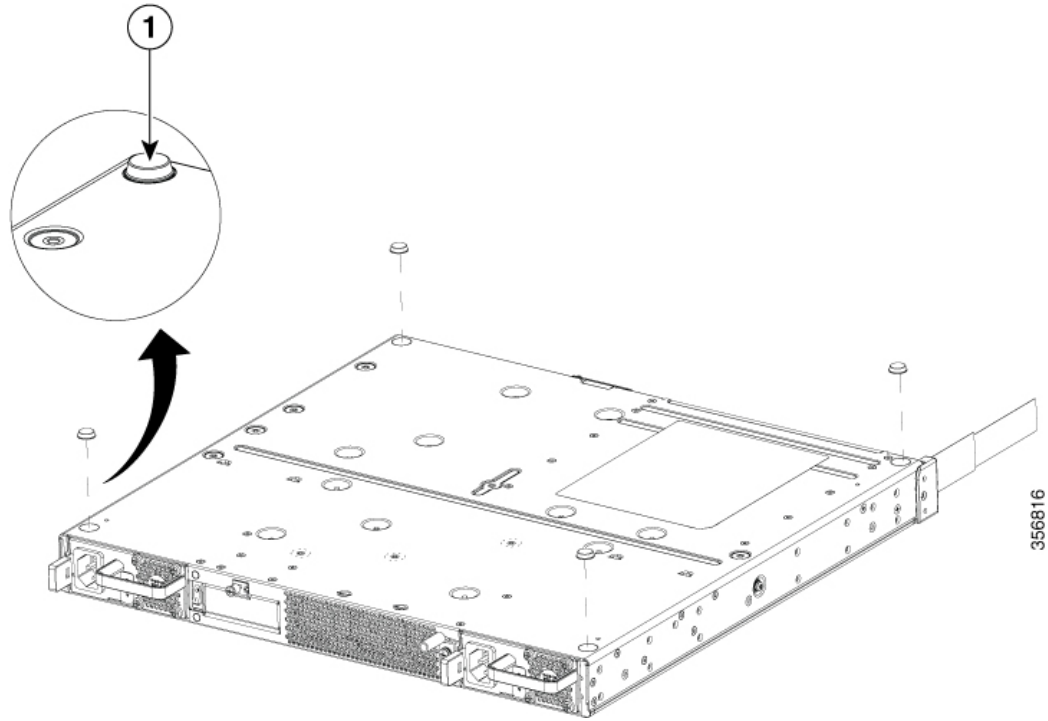
**Warning** To prevent personal injury or damage to the chassis, never attempt to lift or tilt the chassis using the handles on modules (such as power supplies, fans, or cards); these types of handles are not designed to support the weight of the unit. Statement 1032

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**Step 1** Attach the elastomeric mount feet (label **1**) to the bottom of the device. The feet come with a pre-applied adhesive. Place the feet in the locations marked by a circle.

**Step 2** You can place the device on a desktop, bench top, or shelf.

Figure 1:



**Note** Do not set the chassis in an area where the high acoustic noise can be an issue.



**Caution** Do not place anything on top of the device that weighs more than 10 pounds (4.5 kg), and do not stack device on a desktop. Excessive distributed weight of more than 10 pounds, or pound point load of 10 pounds on top could damage the chassis.



**Caution** Your chassis installation must allow unrestricted airflow for chassis cooling. For placing the device on a desktop, keep at least 1 inch (2.54 cm) of clear space beside the cooling inlet and exhaust vents.

After the device is installed, you must connect the chassis to a reliable earth ground. For the chassis ground connection procedures, see the Chassis Grounding section.

## Rack Mount the Chassis



**Warning** Supply Circuit

To reduce risk of electric shock and fire, take care when connecting units to the supply circuit so that wiring is not overloaded. Statement 1018

**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 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

C8300-1N1S-4T2X|6T and C8300-2N2S-4T2X|6T can be installed in a 19-inch (48.26-cm) EIA and a 23-inch (58.42-cm) Southwestern Bell Corporation (SBC) racks. The C8300-1N1S-4T2X|6T and C8300-2N2S-4T2X|6T can also be mounted in a 600-mm ETSI rack. Use the standard brackets shipped with the router for mounting the chassis in a 19-inch EIA rack; you can order optional larger brackets for mounting the chassis in a 23-inch SBC rack.

You can mount the devices in the following ways:

- Power Supply (PS) mounting—Brackets are attached at the PS side of the chassis with the front panel facing forward.
- Center-PS mounting—Brackets are attached in the center of the chassis with the PS side facing forward.
- Center-I/O mounting—Brackets are attached in the center I/O side of the chassis with only the I/O side facing forward.
- I/O mounting—Brackets are attached at the I/O side of the chassis with the I/O side facing forward.

## Attach the Rack-Mounting Brackets

**Caution**

Do not over-torque the screws. The recommended torque is 15 to 18 inch-lbs (1.7 to 2.0 N-m).

**Caution**

Your chassis installation must allow unrestricted airflow for chassis cooling.

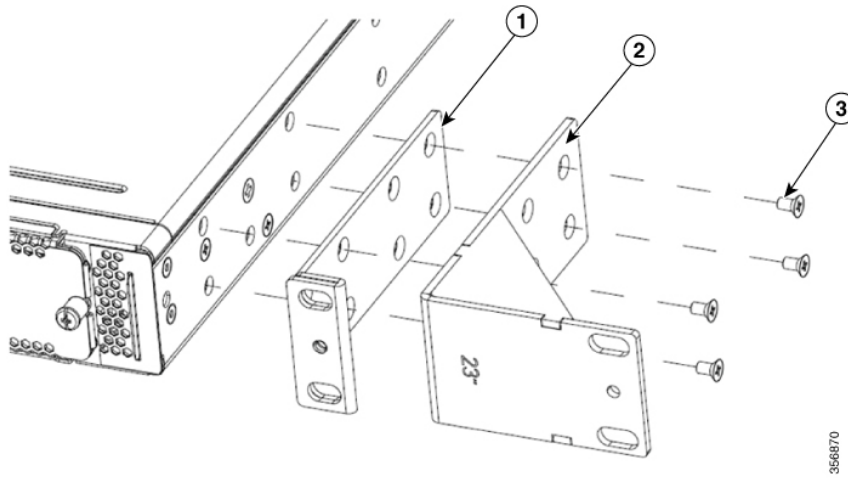
Attach the mounting brackets to the chassis as shown in the below figure using the screws provided. Use a #2 Philips screwdriver.

To attach the rack-mounting brackets to the C8300-1N1S-4T2X|6T device, perform these steps:

- Step 1** Select the depth location for the router in the equipment rack. I/O side flush; I/O side recessed for the RFID badge; middle mount from the I/O side; middle mount from the power supply side; or power supply side flush.
- Step 2** Align the rack mount bracket with the mounting holes in the side of the device.
- Step 3** Insert the #6-32 FHM screws. Use only the screws that are provided in the rack mount bracket kit.
- Step 4** Tighten the screws to a torque value of 15 to 18 inch-lb. (1.7 to 2.0 N-m).

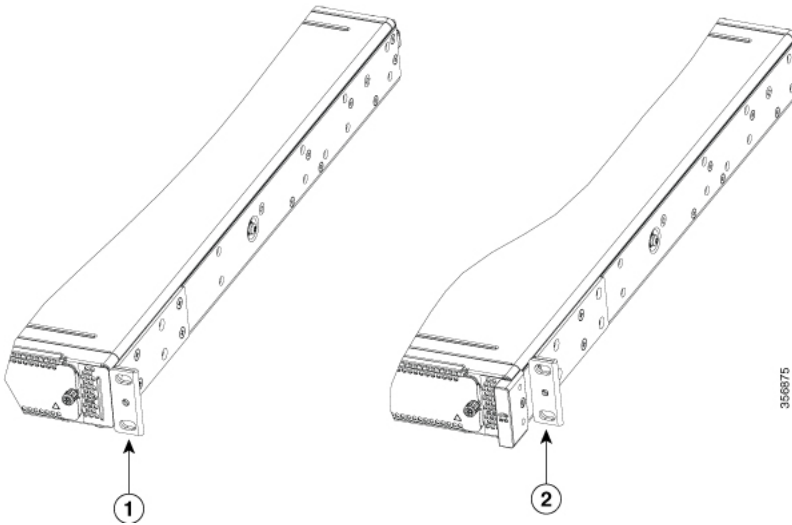
Attach the Rack-Mounting Brackets

Figure 2: Install Brackets for I/O-Side Mounting (C8300-1N1S-4T2X|6T)



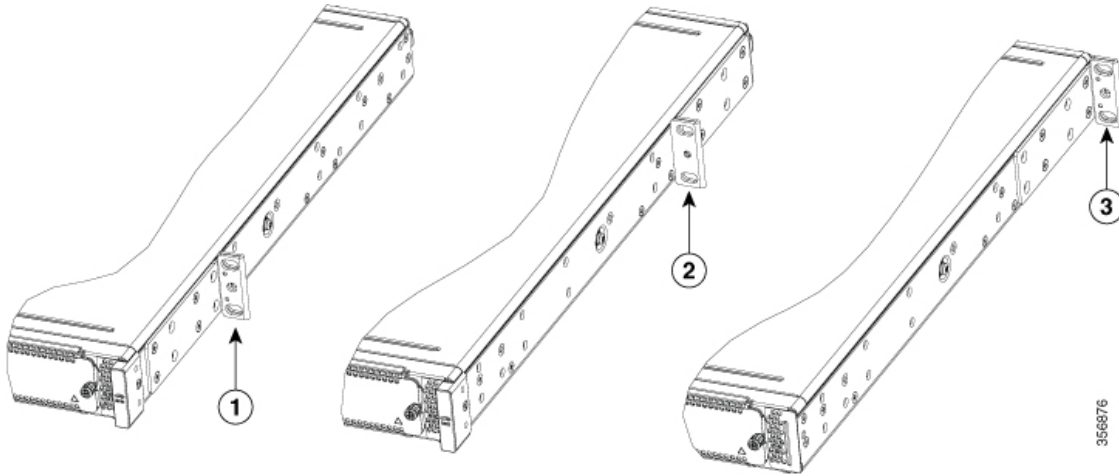
1	19-inch brackets
2	23-inch brackets
3	#6-32 PHMS

Figure 3: Rack Mount Bracket Mounting Positions



1	Flush with I/O side (No RFID)
2	I/O Side Recessed (for RFID)

Figure 4: Install Brackets for PS Mounting (C8300-1N1S-4T2X|6T)

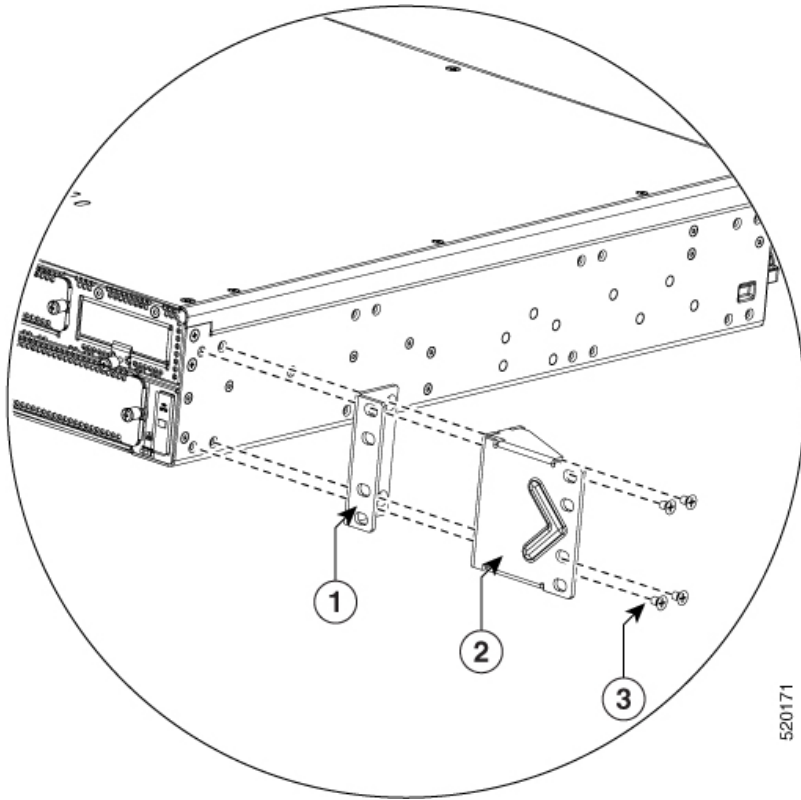


1	Mid-Mount from I/O Side
2	Mid-Mount from Power Supply Side
3	Power Supply Side Flush

To attach the rack-mounting brackets to a C8300-2N2S-4T2X|6T device, perform these steps:

- Step 1** Select the depth location for the router in the equipment rack. I/O side flush; I/O side recessed for the RFID badge; middle mount from the I/O side; middle mount from the power supply side; or power supply side flush.
- Step 2** Align the rack mount bracket with the mounting holes in the side of the device.
- Step 3** Insert the #8-32 FHM screws. Use only the screws that are provided in the rack mount bracket kit.
- Step 4** Tighten the screws to a torque value of 15 to 18 inch-lb. (1.7 to 2.0 N-m).

Figure 5: Install Brackets for I/O-Side Mounting (C8300-2N2S-4T2X(6T))

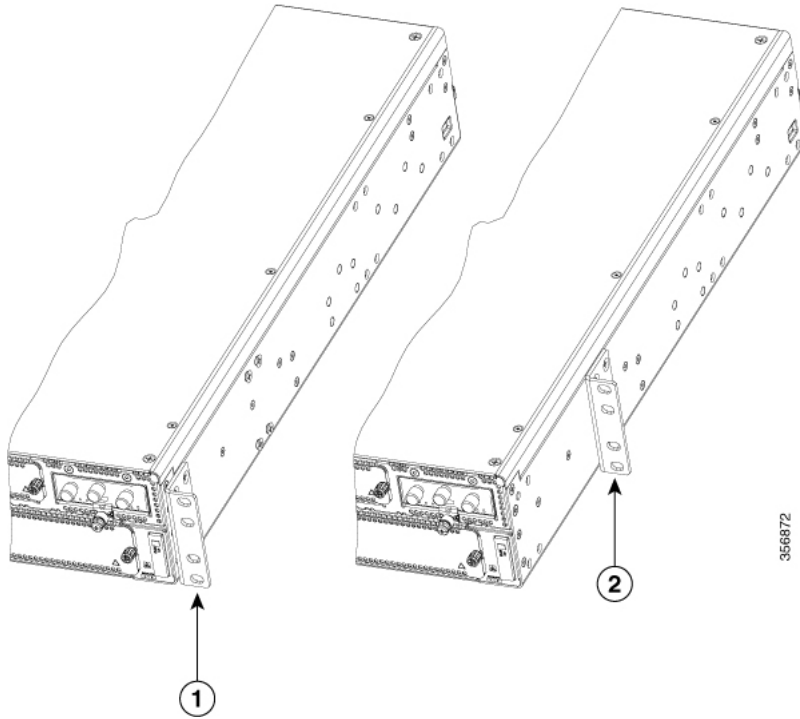


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1	19-inch brackets
2	23-inch brackets
3	#8-32 FHM screw

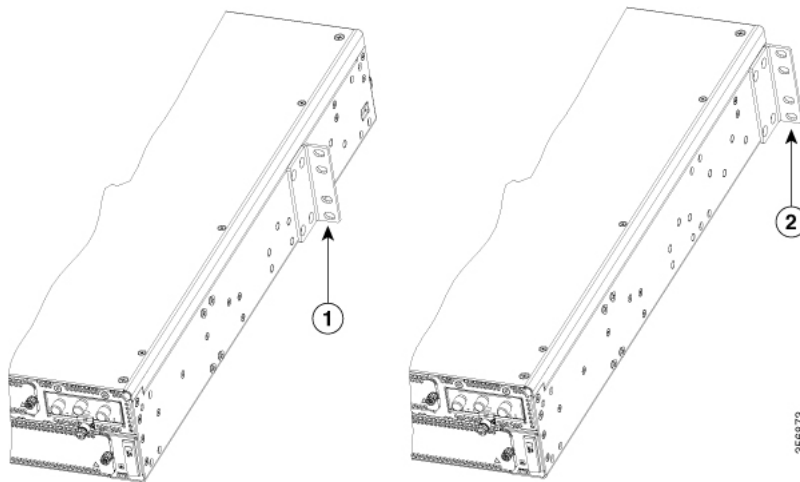


**Figure 6: Install Brackets for I/O Center Mounting (C8300-2N2S-4T2X|6T)**



1	Flush with I/O Side
2	Mid-Mount from Power Supply Side

**Figure 7: Install Brackets for PS Mounting (C8300-2N2S-4T2X|6T)**



1	Mid-Mount from Power Supply Side
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2

Power Supply Side Flush

## Mount the Chassis on a Rack

After you attach the rack-mount brackets to the chassis, use screws to install the chassis onto the rack.



**Note** C8300-2N2S-4T2X supports only rack mount, does not support wall mount or desktop mount options.



**Tip** For both the 19-inch EIA brackets and the 23-inch brackets, start the lower pair of screws first, and rest 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 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.



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

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



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

Figures below shows a typical rack mounting of a chassis in a rack.

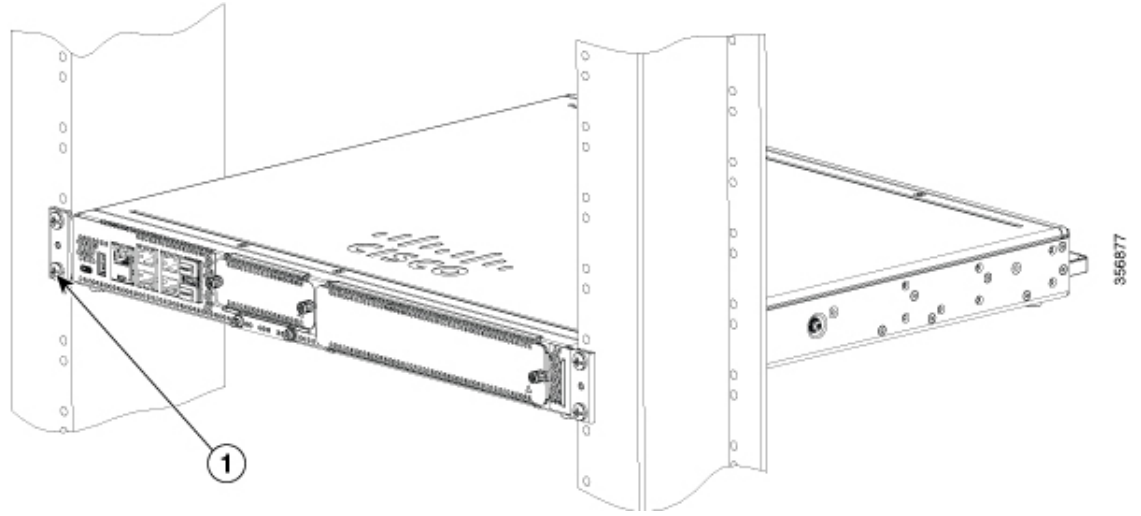
**Step1.** Locate the desired position in the equipment rack.

**Step2.** Align the holes in the rack mount brackets with the mounting holes in the equipment frame.

**Step3.** Secure the device using mounting screws appropriate for your equipment frame. The rack mount brackets have been designed #12-24 PHM screws.

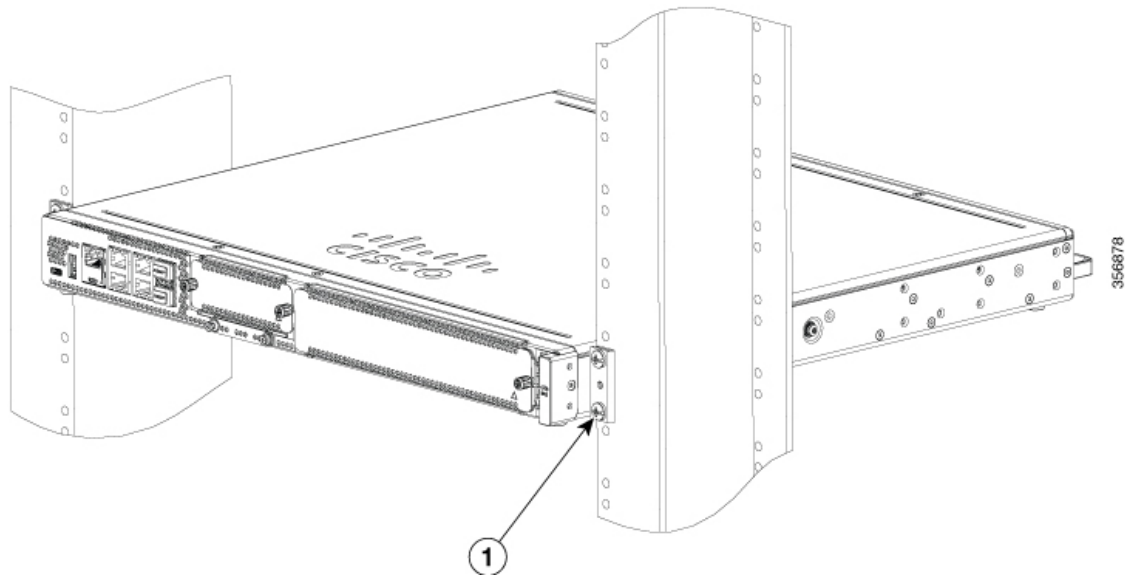
**Step4.** Tighten the screws to the appropriate torque value for your equipment

Figure 8: I/O Flush Mount, no RFID (C8300 1N1S-4T2X|6T)



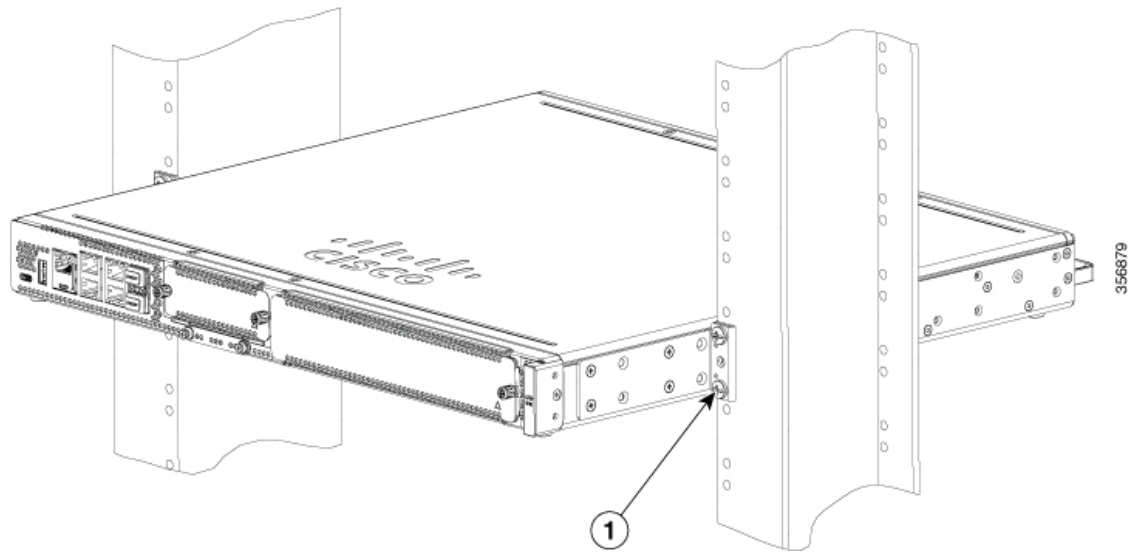
Rack Mounting screws

Figure 9: I/O Mount with RFID (C8300 1N1S-4T2X|6T)



Rack Mounting screws

Figure 10: Mid Mount from I/O Side (C8300-1N1S-4T2X|6T)



1 Rack Mounting screws

Figures below shows a typical rack mounting of a chassis in a rack.

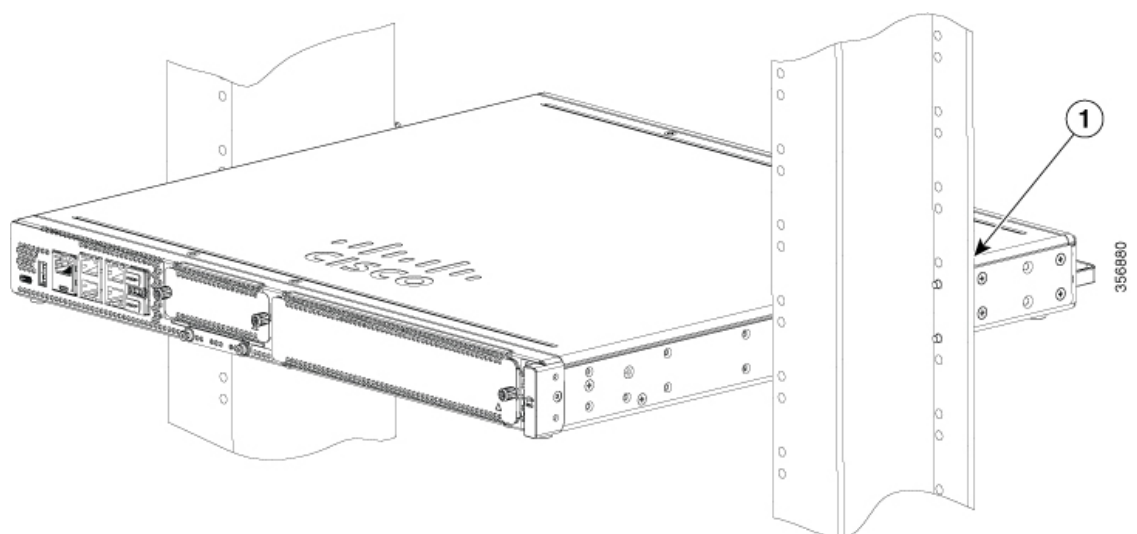
**Step1.** Locate the desired position in the equipment rack.

**Step2.** Align the holes in the rack mount brackets with the mounting holes in the equipment frame.

**Step3.** Secure the device using mounting screws appropriate for your equipment frame. The rack mount brackets have been designed #12-24 PHM screws.

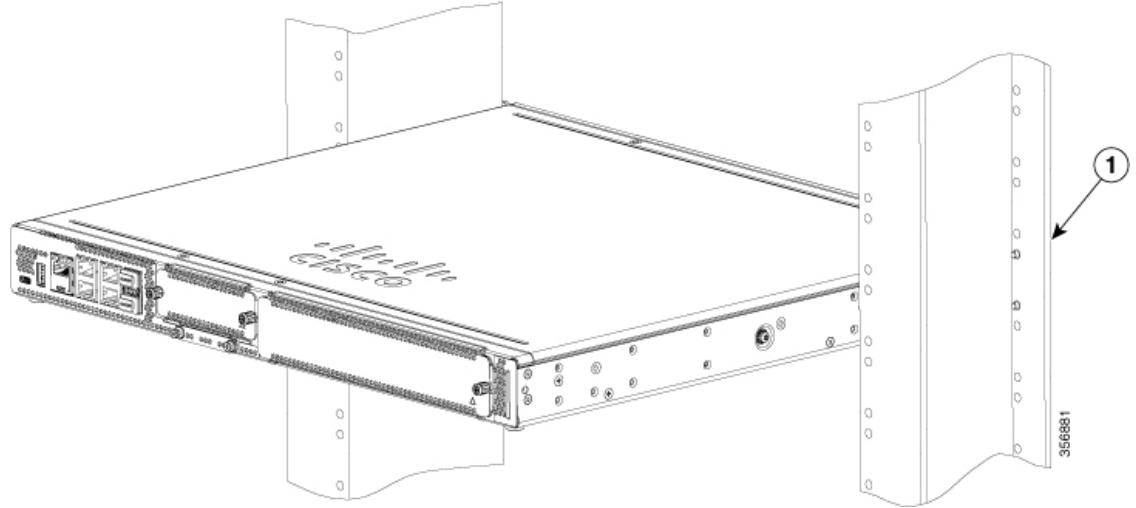
**Step4.** Tighten the screws to the appropriate torque value for your equipment

Figure 11: Mid-Mount from Power Supply Side (C8300-1N1S-4T2X|6T)



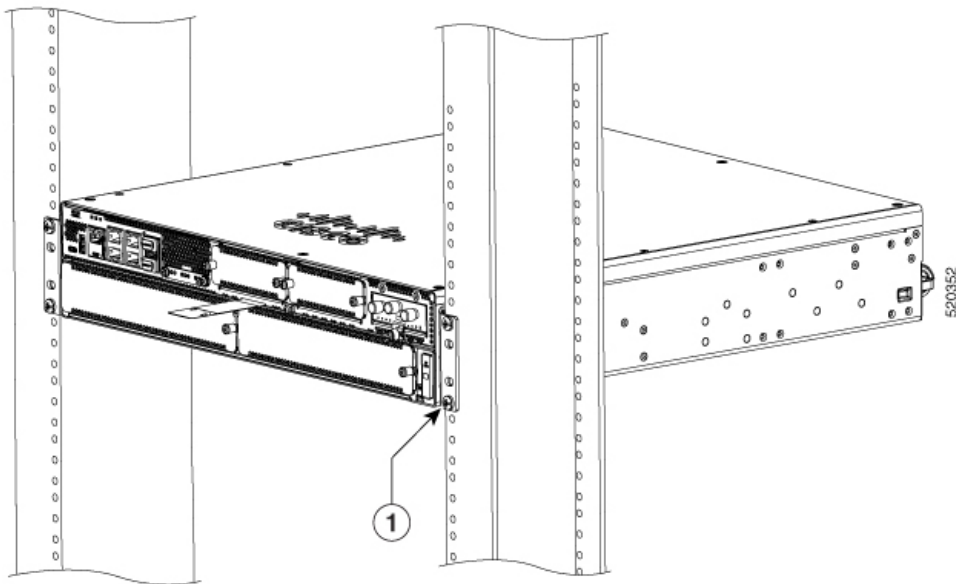
1 Rack Mounting screws

Figure 12: Power Supply Side-Mount (C8300 1N1S-4T2X|6T)



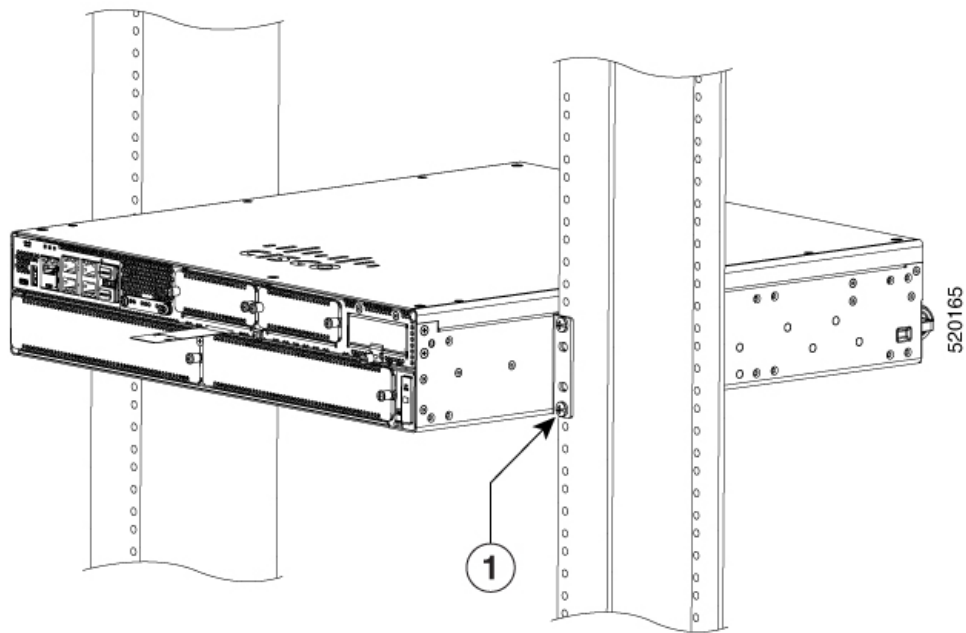
1 Rack Mounting screws

Figure 13: I/O Mount in Rack (C8300 2N2S-4T2X|6T)



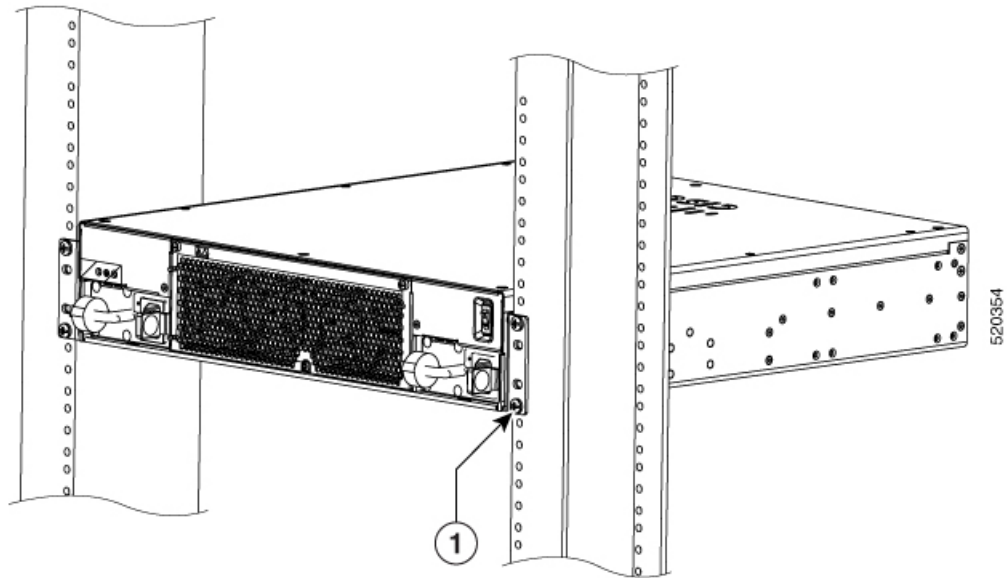
1 Rack Mounting screws

Figure 14: Mid Mount from I/O Side (C8300 2N2S-4T2X|6T)



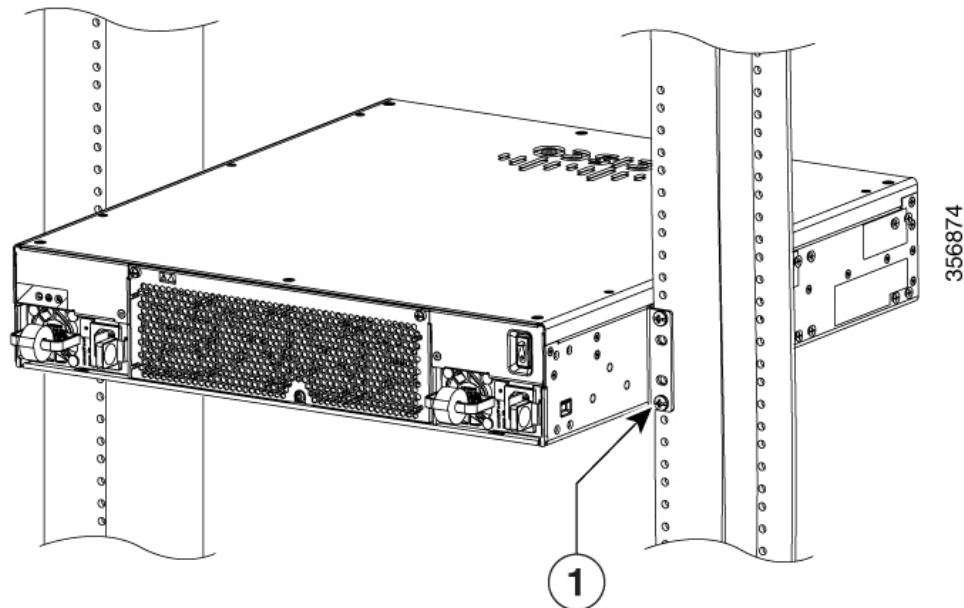
- |                               |
|-------------------------------|
| <p>1 Rack Mounting screws</p> |
|-------------------------------|

Figure 15: Power Supply Side Mount (C8300 2N2S-4T2X|6T)



Rack Mounting  
screws

Figure 16: Mid-Mount from Power Supply Side (C8300 2N2S-4T2X|6T)



1 Rack Mounting  
screws

## Attach Cisco Cisco Catalyst 8300 Series Edge Platforms on a Wall



**Caution** Only the C8300-1N1S-4T2X|6T are designed to be wall mounted. The C8300-2N2S-4T2X|6T have not been designed to be wall mounted.



**Caution** When mounted on a wall, the C8300-1N1S-4T2X|6T should always be oriented with a side of the device oriented in the downward position. The I/O side and power supply side should be oriented so that the fan vents and cable entry will be oriented to the left or right. The I/O side or power supply should never be oriented downwards.



**Caution** Your chassis installation must allow unrestricted airflow for chassis cooling.

**Step 1** Attach the rack mount brackets to the sides of the device using only the hardware provided in the wall mounting kit (#6-32 x 0.44 inch PHMS).

**Step 2** The outer face of the rack mount bracket ear, the part that typically mounts to an equipment rack, should be placed against the side of the router. Use the spacers provided to adapt the larger obround holes down to smaller holes for the screws to fit into.

**Step 3** The brackets should be located diagonally from each other as shown in the figure below.

**Step 4** Tighten the screws to a torque value of 15 to 18 inch-lb. (1.7 to 2.0 N-m).

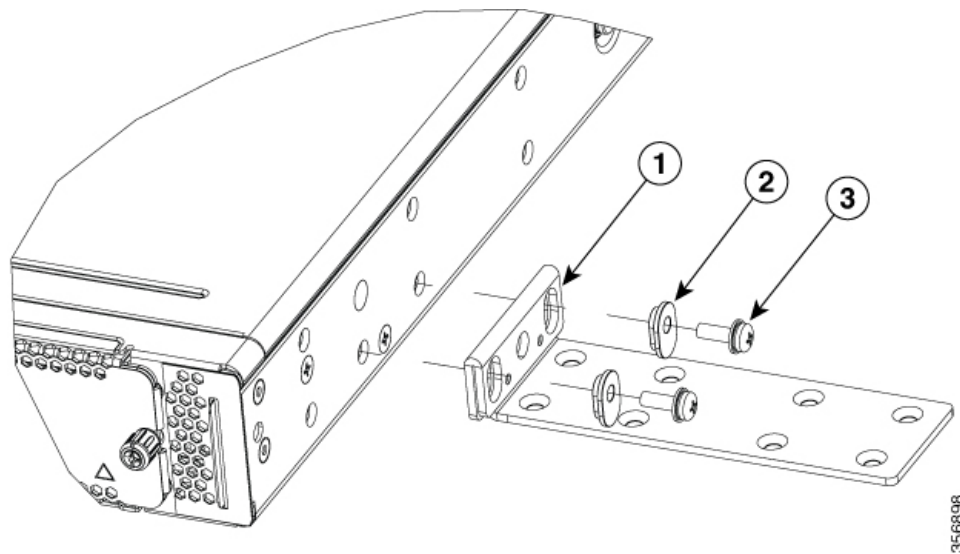
**Step 5** Use #6 or 4mm hardware to attach the brackets to the wall. At least 4 screws should be used per bracket, 8 screws in total. The screw length should be a minimum of 1 inch in length (25.4 mm).



**Note** The customer supplies the appropriate hardware. Each mounting bracket has 8 holes that can be used for the mounting fasteners.

**Step 6** Route the cables so that they do not put a strain on the connectors or mounting hardware.

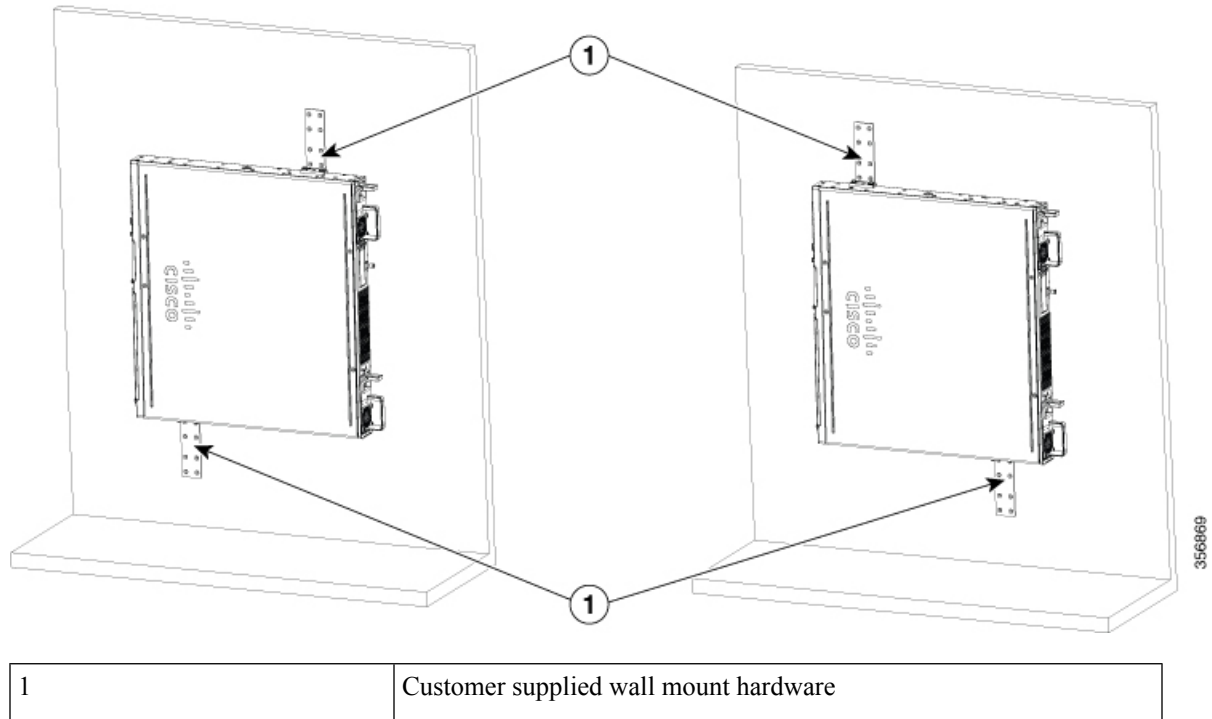
**Figure 17: Attach Wall Mount Brackets (C8300-1N1S-4T2X/6T)**



1	19-inches bracket
2	Plastic spacer
3	#6-32 PHMS



Figure 18: Wall Mount the C8300-1N1S-4T2X|6T



## Ground the Chassis

After the device is installed, you must connect the chassis to a reliable earth ground.

### Chassis Grounding



#### 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

During this procedure, wear grounding wrist straps to avoid ESD damage to the card. Do not directly touch the backplane with your hand or any metal tool, you could shock yourself. Statement 94

You must connect the chassis to a reliable earth ground; the ground wire must be installed in accordance with local electrical safety standards.

- For grounding, use size 6 AWG (13 mm<sup>2</sup>) copper wire and the ground lug provided in the accessory kit.



#### Note

This equipment is suitable for installation in Network Telecommunications Facilities and locations where the NEC applies. The equipment is suitable for installation as part of the Common Bonding Network (CBN).

- For NEC-compliant grounding, use size 14 AWG (2 mm<sup>2</sup>) or larger copper wire and an appropriate user-supplied ring terminal with an inner diameter of 1/4 in. (5–7 mm)
- AWG 10 (4 mm<sup>2</sup>) or larger wire for EN/IEC 60950-1 and EN/IEC 62368-1 compliant chassis grounding

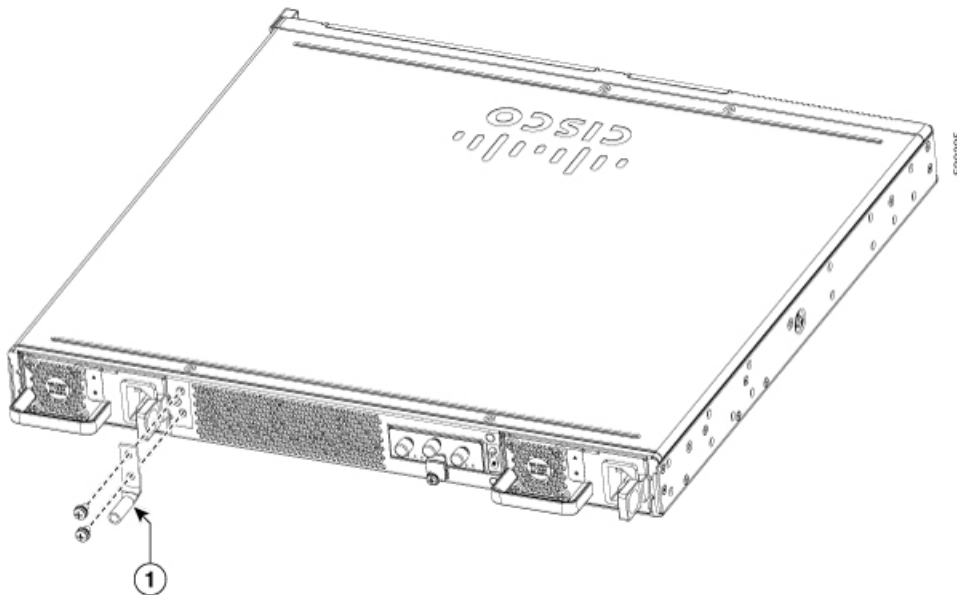


**Note** The grounding wire should be sized according to local and national installation requirements. The above recommended AWG values for NEBS-compliant, NEC-compliant, EN/IEC 60950-1 and EN/IEC 62368-1 as the minimum requirement respectively, the higher AWG value recommendation also with the higher priority, this means AWG 10 is the minimum requirement only when NEBS is not required. Commercially available 6-AWG grounding wire is always preferred from the chassis to the rack ground or directly to the common bonding network (CBN). The length of the grounding wire depends on the proximity of the switch to proper grounding facilities.

To install the ground connection for your device, perform the following steps:

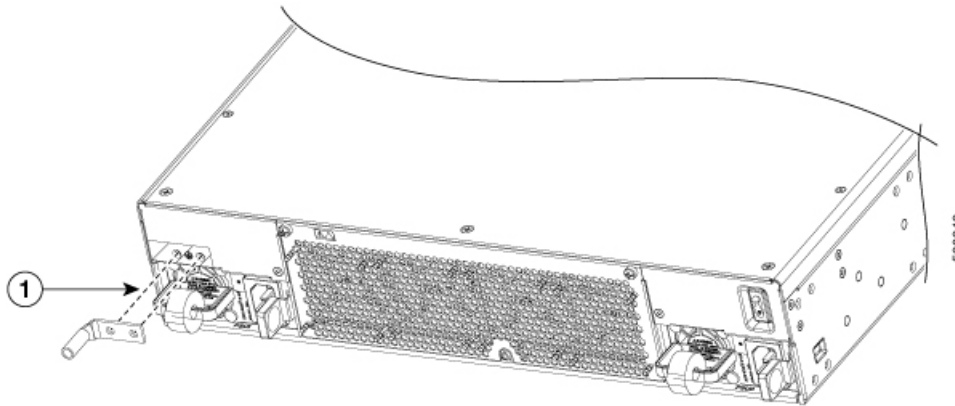
- Step 1** Strip one end of the ground wire to the length required for the ground lug or terminal.
- For the ground lug—approximately 0.75 inch (20 mm)
  - For user-provided ring terminal—as required
- Step 2** Crimp the ground wire to the ground lug or ring terminal, using a crimp tool of the appropriate size.
- Step 3** Attach the ground lug or ring terminal to the chassis as shown in Chassis Grounding section. For a ground lug, use the two screws with captive locking washers provided. For a ring terminal, use one of the screws provided. Tighten the screws to a torque of 8 to 10 in-lb (0.9 to 1.1 N-m).

**Figure 19: Chassis Ground Connection on the C8300 1N1S-4T2X16T**



1	Ground lug
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Figure 20: Chassis Ground Connection on the C8300 2N2S-4T2X|6T



**Step 4** Connect the other end of the ground wire to a known reliable earth ground point at your site.

1	Ground lug
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## Connect Power to the Device

This section explains how to connect power to the device.



**Warning** Read the installation instructions before connecting the system to the power source. Statement 1004



**Warning** This unit might have more than one power supply connection. All connections must be removed to de-energize the unit. Statement 1028



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



**Note** The installation must comply with all required electrical codes applicable at the installation site.



**Warning** When installing the product, please use the provided or designated connection cables/power cables/AC adaptors. 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” shown on the code) for any other electrical devices than products designated by CISCO. The use of cables that are certified by Electrical Appliance and Material Safety Law (that have “PSE” shown on the code) is not limited to CISCO-designated products. Statement 371.

If your device uses AC power, connect it to a 15 A, 120 VAC (10 A, 240 VAC) circuit with overcurrent protection.



**Note** The input voltage tolerance limits for AC power are 90 and 264 VAC.



**Note** This product requires surge protection to be provided as part of the building installation. To comply with the Telcordia GR-1089 NEBS standard for electromagnetic compatibility and safety, an external surge protective device (SPD) is required at the AC power service equipment.

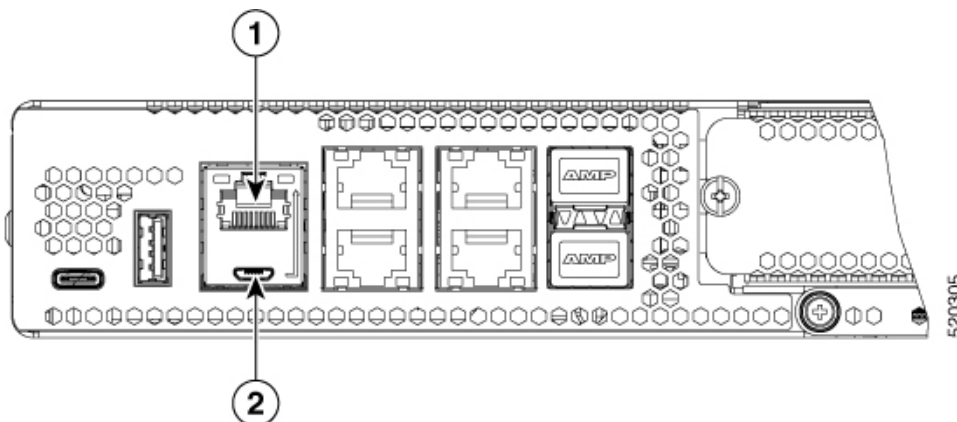


**Warning** This product relies on the building’s installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than 20A. Statement 1005

## Connect to a Console Terminal or Modem

The Catalyst 8300 Series Edge Platforms have asynchronous serial ports. These ports provide administrative access to the router either locally (with a console terminal or a PC). To configure the router through the Cisco IOS CLI, you must establish a connection between the router console port and either a terminal or a PC.

Use the following cables and adaptors to establish a local or remote connection.



**Table 1: Local and Remote Connections**

Port Type	Cable	Section
1. Serial (RJ-45)	EIA RJ-45	Connect to the Serial Port with Microsoft Windows
2. Serial (USB)	USB 5-pin mini USB Type-B-to-USB Type-A	

## Connect to the Console Port with Mac OS X

This procedure describes how to connect a Mac OS X system USB port to the console using the built in OS X Terminal utility.

- 
- Step 1** Use the Finder to go to Applications > Utilities > Terminal.
- Step 2** Connect the OS X USB port to the router.
- Step 3** Enter the following commands to find the OS X USB port number

**Example:**

```
macbook:user$ cd /dev
macbook:user$ ls -ltr /dev/*usb*
crw-rw-rw- 1 root  wheel          9,  66 Apr  1 16:46 tty.usbmodem1a21 DT-macbook:dev user$
```

- Step 4** Connect to the USB port with the following command followed by the router USB port speed

**Example:**

```
macbook:user$ screen /dev/tty.usbmodem1a21 9600
```

**To disconnect the OS X USB console from the Terminal window**

Enter Ctrl-a followed by Ctrl-\

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## Connect to the Console Port with Linux

This procedure shows how to connect a Linux system USB port to the console using the built in Linux Terminal utility.

- 
- Step 1** Open the Linux Terminal window.
- Step 2** Connect the Linux USB port to the router.
- Step 3** Enter the following commands to find the Linux USB port number

**Example:**

```
root@usb-suse# cd /dev
root@usb-suse /dev# ls -ltr *ACM*
```

```
crw-r--r--  1 root    root      188,  0 Jan 14 18:02 ttyACM0
root@usb-suse /dev#
```

**Step 4** Connect to the USB port with the following command followed by the router USB port speed

**Example:**

```
root@usb-suse /dev# screen /dev/ttyACM0 9600
```

**To disconnect the Linux USB console from the Terminal window**

Enter Ctrl-a followed by : then quit

## Install the Silicon Labs USB Device Driver

This section contains the following topics:

### Install the Silicon Labs Windows USB Device Driver

- Step 1** Go to the Silicon Labs website ([www.silabs.com/developers/usb-to-uart-bridge-vcp-drivers?tab=downloads](http://www.silabs.com/developers/usb-to-uart-bridge-vcp-drivers?tab=downloads)), and click CP210x Universal Windows Driver.
- Step 2** Unzip the downloaded folder, and select the installer for your system configuration. The Device Driver Installation Wizard begins.
- Step 3** Click Next on the Installation Wizard, then click Finish to complete installation.
- Step 4** Open the Device Manager on your system and click the Ports (COM & LPT) drop-down.
- Step 5** Insert the USB console cable and power into your system. The Device manager refreshes and indicates the newly-detected COM port.
- Step 6** Open a terminal emulator and click the Serial connection type. Input the values for Serial Line and Speed (or Baud Rate).
- Step 7** Click Open.
- Step 8** The terminal emulator opens. Click Enter to view the console output response.  
The USB console is ready for use.

### Install the Silicon Labs Mac USB Device Driver

- Step 1** Go to the Silicon Labs website ([www.silabs.com/developers/usb-to-uart-bridge-vcp-drivers?tab=downloads](http://www.silabs.com/developers/usb-to-uart-bridge-vcp-drivers?tab=downloads)), and click CP210x VCP Mac OSX Driver.
- Step 2** Click the Downloads folder, then click the macOS\_VCP\_Driver folder, and double-click the SiLabsUSBDriverDisk.dmg program.
- Step 3** Click Install CP210X VCP Driver, and then click Open. The Driver Installer begins.
- Step 4** Follow installer instructions. Click Continue, scroll all the way down, then click Continue, and click Agree.
- Step 5** Click Continue, and enter your password. Then click Install Helper, and click Close.

- Step 6** Insert the USB console cable and power into your system..
- Step 7** Open a terminal and type `cd/dev`, and then type `ls-ltr`. Serial port `tty.SLAB_USBtoUART` appears.
- Step 8** Type `screen/dev/tty.SLAB_USBtoUART <baudrate>` to see console output. Console will show response upon first Enter key if there is no output.
- The USB console is ready for use.

## Connect WAN and LAN Interfaces

This section describes how to connect WAN and LAN interface cables. Before you connect the interface cables, refer to the following warning statements:



**Warning** Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations. Statement 1036.



**Warning** Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface. Statement 1037.



**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, LAN, PoE. Statement 1044.



**Warning** Avoid using or servicing any equipment that has outdoor connections during an electrical storm. There may be a risk of electric shock from lightning. Statement 1088.

## Ports and Cabling

The connections summarized here are also described in detail in the document on Cisco.com: Cisco Modular Access Cable Specifications

**Table 2: WAN, LAN, and Voice Connections**

Port or Connection	Port Type, Color <sup>1</sup>	Connection:	Cable
Ethernet	RJ-45, yellow	Ethernet hub or Ethernet switch	Category 5 or higher Ethernet
T1/E1 WANxCE1T1-PRI	RJ-48C/CA81ARJ-48S, tan	T1 or E1 networkExternal T1 CSU or other T1 equipment	RJ-48 T1/E1RJ-48S to RJ-48S TERJ-48S to RJ-48S NTRJ-48S to RJ-48S T1RJ-48S to bareRJ-48S to BNCRJ-48S to twinaxial cableRJ-48S to DB-15RJ-48S to DB-15 null

Port or Connection	Port Type, Color <sup>1</sup>	Connection:	Cable
T3/DS3/E3 WAN	BNC connector	T3 network, CSU/DSU, or other T3/DS3 equipment	75-ohm coaxial cable
Cisco serial	60-pin D-sub, blue	CSU/DSU and serial network or equipment	Cisco serial transition cable that matches the signaling protocol (EIA/TIA-232, EIA/TIA-449, V.35, X.21, or EIA-530) and the serial port operating mode (DTE or DCE). <sup>2</sup>
Cisco Smart serial	Cisco Smart compact connector, blue	CSU/DSU and serial network or equipment	
Gigabit Ethernet SFP, optical	LC, color according to optical wavelength	1000BASE-SX, -LX, -LH, -ZX, -CWDM	Optical fiber as specified on applicable data sheet
Gigabit Ethernet SFP, copper	RJ-45	1000BASE-T	Category 5, 5e, 6 UTP

<sup>1</sup> Cable color codes are specific to Cisco cables.

<sup>2</sup> See the Cisco Modular Access Router Cable Specifications document for information about choosing these cables.

## Connection Procedures and Precautions

- Connect each WAN and LAN to the appropriate connector on the chassis or on a network module or interface card.
- Position the cables carefully, so that they do not put strain on the connectors.
- Organize cables in bundles so that cables do not intertwine.
- Inspect the cables to make sure that the routing and bend radius is satisfactory. Reposition cables, if necessary.
- Install cable ties in accordance with site requirements.

For cable pinouts, see Cisco Modular Access Cable Specifications.



**Note** After installing the device and connecting the cables, you can configure the device with basic configurations. For more information on how to configure the device, see the Cisco Catalyst 8300 Series Edge Platforms Software Configuration Guide.