Installing the Chassis

Rack Mount the Chassis

The chassis can be mounted on a 4-post or a 2-post rack.

Warning

Statement 1032—Lifting the Chassis

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.

Warning

Statement 1006—Chassis Warning for Rack-Mounting and Servicing

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.

Rack-Mount the Chassis in a 4-Post Rack

This section describes how to install these routers in a 4-post rack:

- Cisco 8102-64H-O
- Cisco 8101-32H-O
- Cisco 8111-32EH-O
- Cisco 8122-64EH-O
- Cisco 8102-28FH-DPU-O
- Cisco 8122-64EHF-O

Caution If the rack is on wheels, ensure that the brakes are engaged or that the rack is otherwise stabilized.

The following table lists the items that are contained in the rack-mount kit.

Table 1: Rack-Mount Kit

Quantity	Part Description
2	Rack-mount brackets
18	M4 x 6-mm Phillips flat-head screws
2	M4 x 6-mm Phillips pan-head screws
2	Rack-mount guides
2	Rack-mount guide rails, 2 lengths for different 4-post depths
1	Grounding lug and screws

Note These routers do not support the Port-Side Exhaust (PSE) configuration:

- Cisco 8102-64H-O
- Cisco 8111-32EH-O
- Cisco 8122-64EH-O
- Cisco 8102-28FH-DPU-O
- Cisco 8122-64EHF-O

Procedure

Step 1 Install the rack-mount brackets to the router as follows:

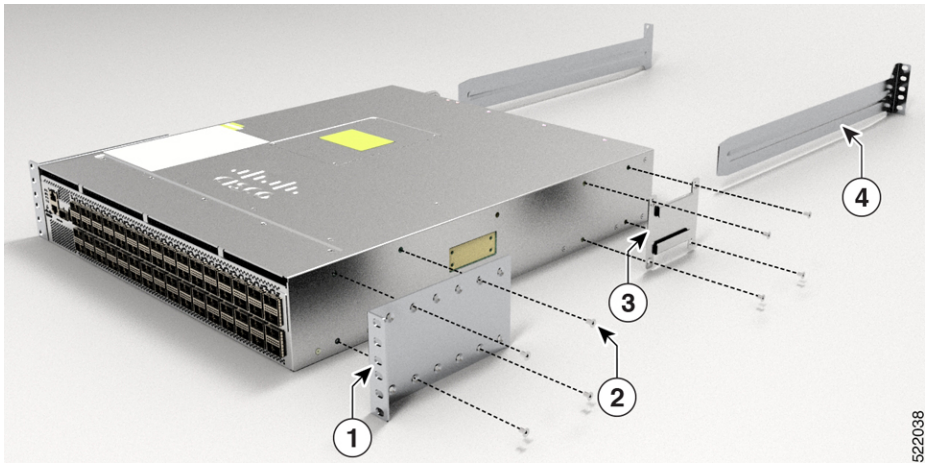
a) Determine which end of the chassis is to be located in the cold aisle as follows:

- If the router has port-side intake modules (fan modules and power modules with burgundy coloring), position the router so that the ports are in the cold aisle.
- If the router has port-side exhaust modules (fan modules and power modules with blue coloring), position the router so that the fan and power supply modules are in the cold aisle.

b) Position a rack-mount bracket on the side of the chassis with its four holes that are aligned to four of the screw holes on the side of the chassis, and then use four M4 flat-head screws with 13.25 in-lbs (1.5 N-m) torque value to attach the bracket to the chassis.

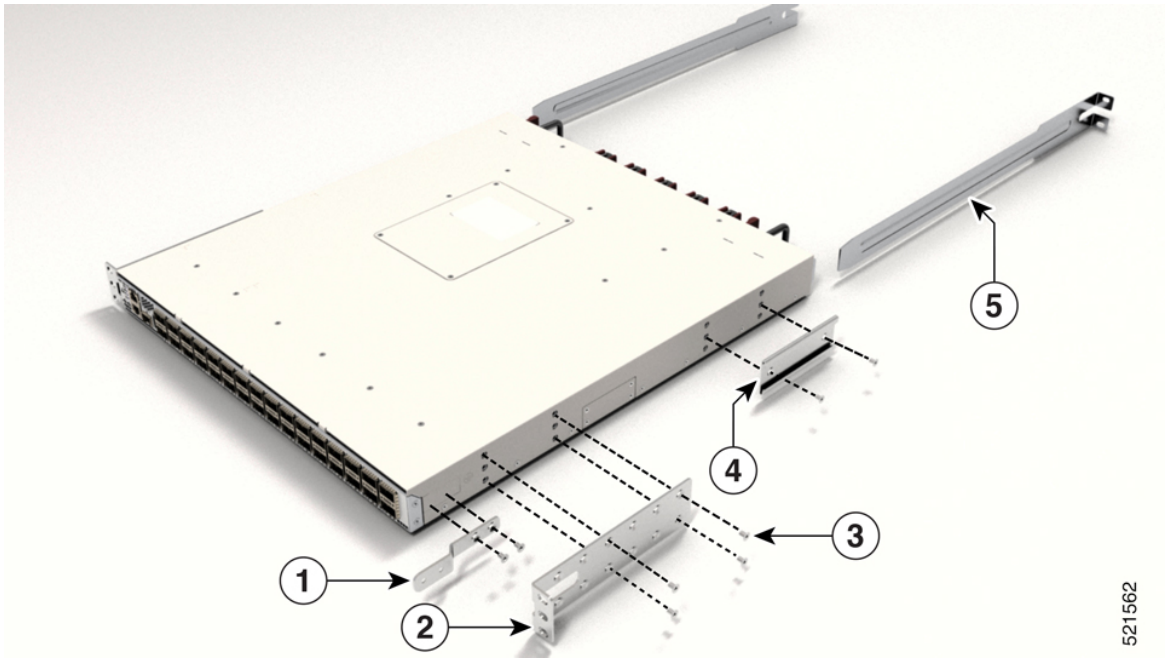
Note
You can align four holes in the rack-mount bracket to four screw holes on the front side of chassis or four screw holes on the rear side of the chassis. The holes that you use depend on which end of your chassis is located in the cold aisle.

Figure 1: Rack-Mount Brackets on Cisco 8102-64H-O Router—Port-Side Intake



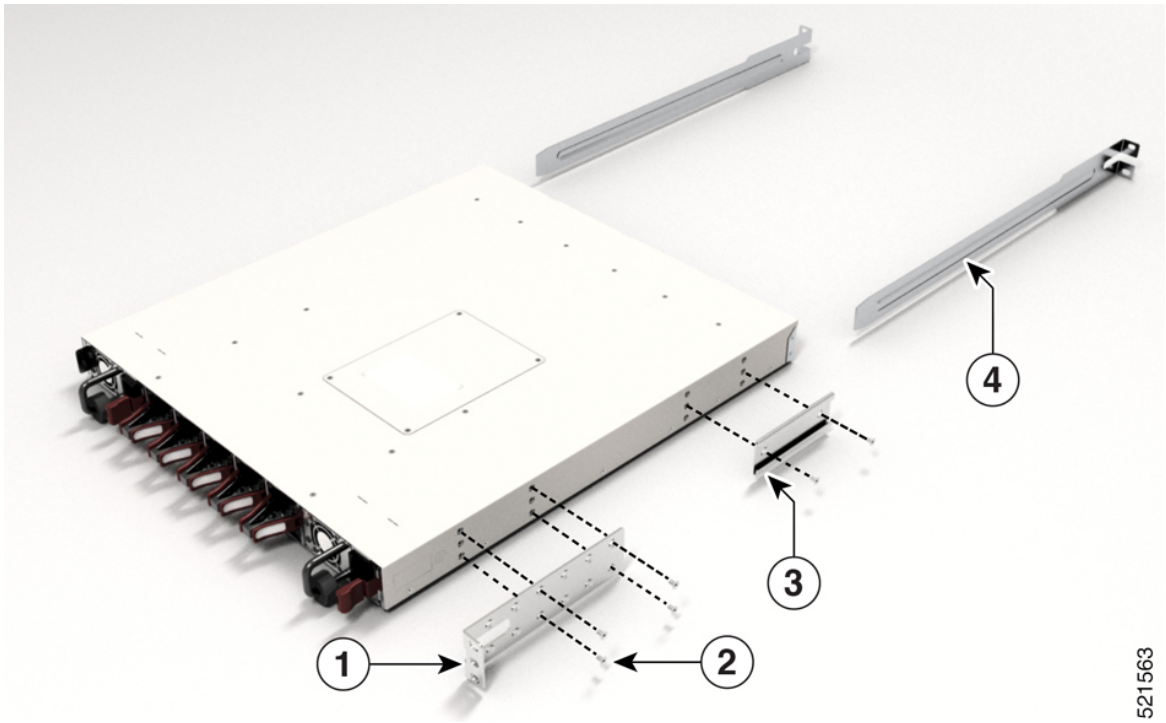
1	Rack-mount brackets	3	Rack-mount guide
2	M4 x 6mm Phillips flat-head screws	4	Rack-mount guide rails

Figure 2: Rack-Mount Brackets on Cisco 8101-32H-O Router—Port-Side Intake



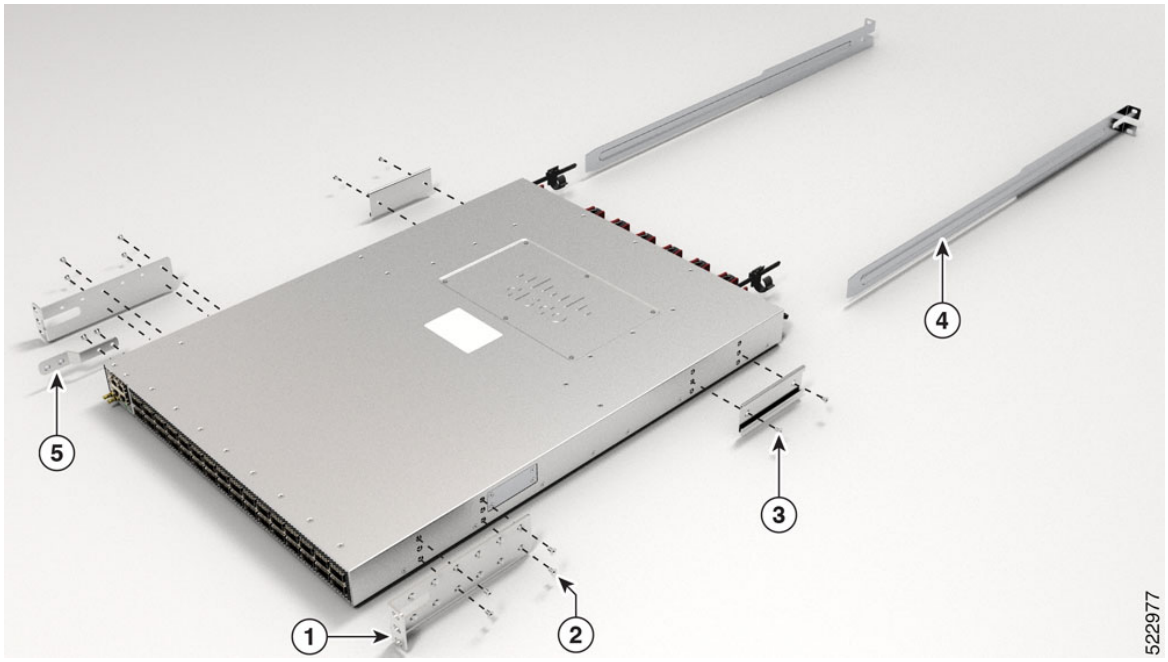
1	Grounding plate	4	Rack-mount guide
2	Rack-mount brackets	5	Rack-mount guide rails. The orientation of the rail changes depening upon the rail that you select.
3	M4 x 6mm Phillips flat-head screws		

Figure 3: Rack-Mount Brackets on Cisco 8101-32H-O Router—Port-Side Exhaust



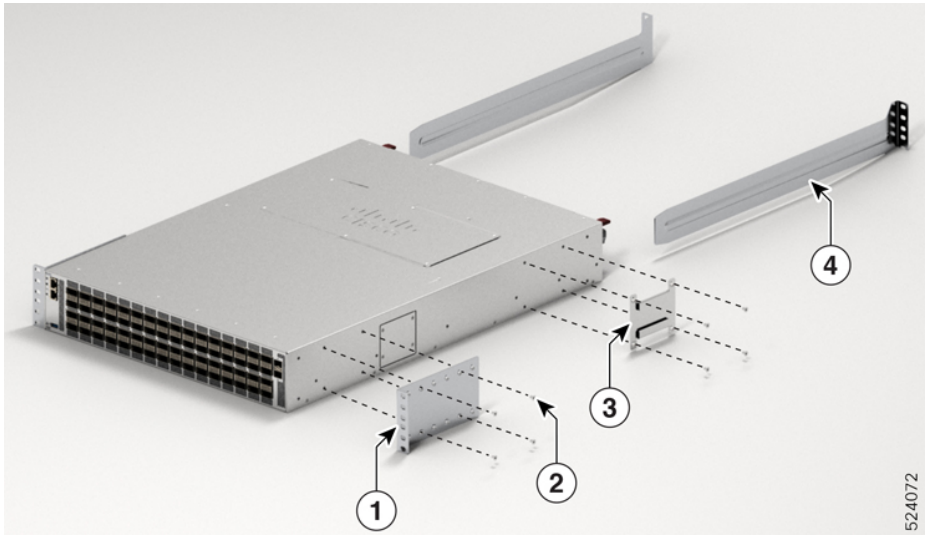
1	Rack-mount brackets	3	Rack-mount guide
2	M4 x 6mm Phillips flat-head screws	4	Rack-mount guide rails. The orientation of the rail changes depening upon the rail that you select.

Figure 4: Rack-Mount Brackets on Cisco 8111-32EH-O Router—Port-Side Intake



1	Rack-mount brackets	4	Rack-mount guide rails. The orientation of the rail changes depening upon the rail that you select.
2	M4 x 6mm Phillips flat-head screws	5	Grounding plate
3	Rack-mount guide		

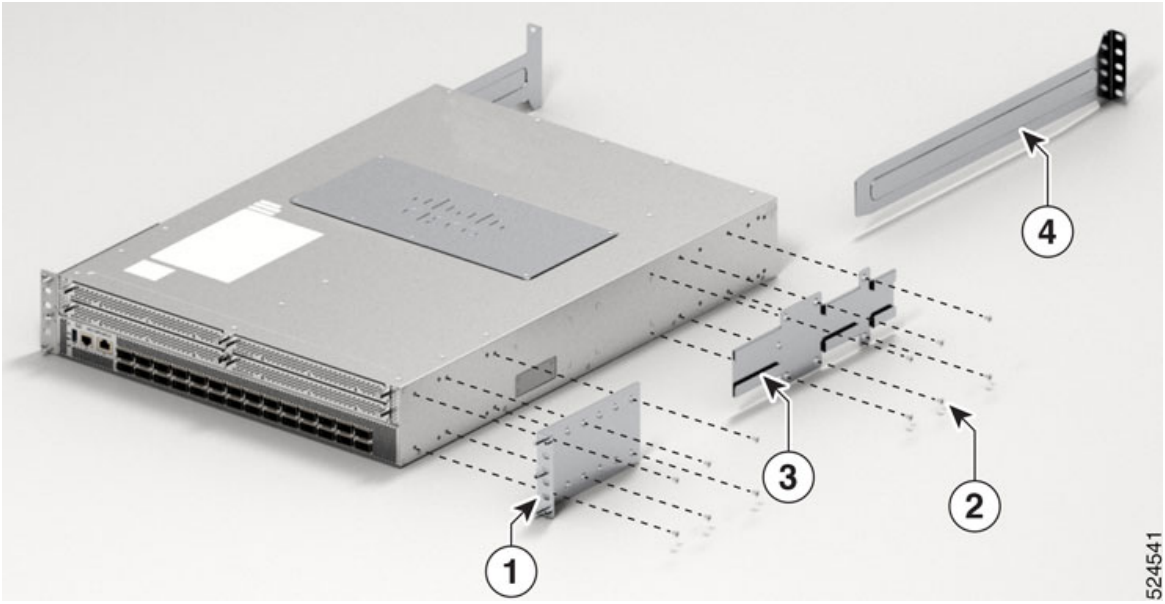
Figure 5: Rack-Mount Brackets on Cisco 8122-64EH-O Router—Port-Side Intake



1	Rack-mount brackets	3	Rack-mount guide

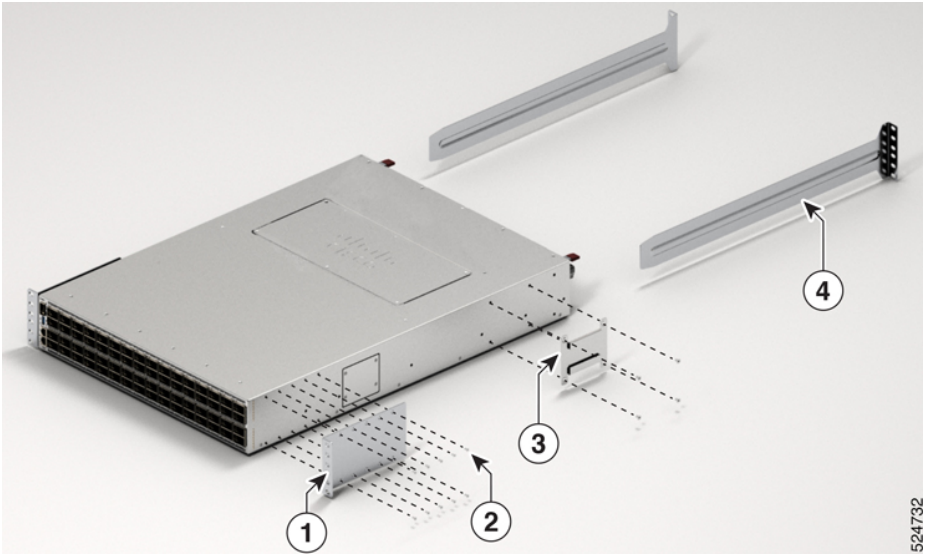
2	M4 x 6mm Phillips flat-head screws	4	Rack-mount guide rails

Figure 6: Rack-Mount Brackets on Cisco 8102-28FH-DPU-O —Port-Side Intake



1	Rack-mount brackets	3	Rack-mount guide
2	M4 x 6mm Phillips flat-head screws	4	Rack-mount guide rails. The orientation of the rail changes depening upon the rail that you select.

Figure 7: Rack-Mount Brackets on Cisco 8122-64EHF-O Router—Port-Side Intake



1	Rack-mount brackets	3	Rack-mount guide
2	M4 x 6mm Phillips flat-head screws	4	Rack-mount guide rails

c) Repeat Step 1b with the other rack-mount bracket on the other side of the router.

Step 2 Install the two rack-mount guides on the chassis:

a) Position a rack-mount guides on the side of the chassis with its two holes aligned to the two screw holes on the side of the chassis, and use two M4 flat-head screws to attach the guides to the chassis. Tighten the screws to a torque of 13.27 in-lb (1.5 N-m).

b) Repeat with the other rack-mount guides on the other side of the router.

Step 3 Install the guide rails to the rack:

a) Position the guide rails at the desired levels on the back side of the rack and use four 12-24 screws or four 10-32 screws, depending on the rack thread type, to attach the rails to the rack.

Note
For racks with square holes, you may need to position a 12-24 or 10-32 cage nut behind each mounting hole in a guide rail before using a 12-24 or 10-32 screw.

b) Repeat with the other guide rail on the other side of the rack.

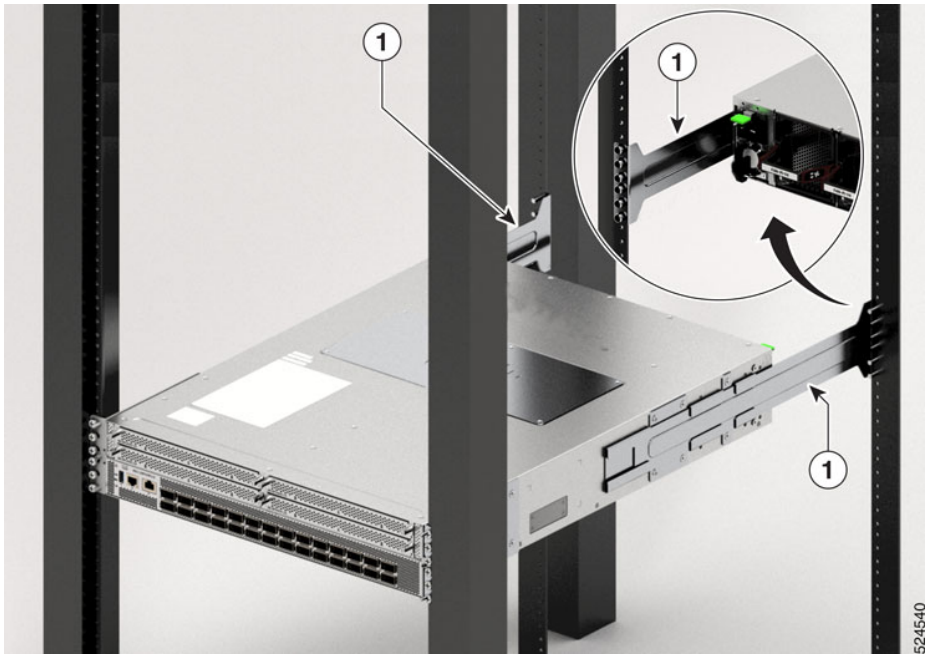
c) Use a tape measure and level to verify that the rails are at the same height and horizontal.

Step 4 Insert the router into the rack and attach:

a) Holding the router with both hands, position the back of the router between the front posts of the rack.

b) Align the two rack-mount guides on either side of the router with the guide rails installed in the rack. Slide the rack-mount guides onto the guide rails, and then gently slide the router all the way into the rack.

Figure 8: Install Cisco 8102-28FH-DPU-O to the rack —Port-Side Intake



1	Rack-mount guide rails.

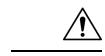
Note
If the router does not slide easily, try realigning the rack-mount guides on the guide rails.

c) Holding the chassis level, insert two screws (12-24 or 10-32, depending on the rack type) through the holes in each of the rack-mount brackets and into the cage nuts or threaded holes in the rack-mounting rail.
d) Tighten the 10-32 screws to 20 in-lb (2.26 N.m) or tighten the 12-24 screws to 30 in-lb (3.39 N.m).

Rack-Mount the Chassis in a 2-Post Rack

This section describes how to install these routers into a cabinet or in a 2-post rack:

- Cisco 8101-32H-O
- Cisco 8111-32EH-O
- Cisco 8122-64EH-O
- Cisco 8102-28FH-DPU-O
- Cisco 8122-64EHF-O



Caution If the rack is on wheels, ensure that the brakes are engaged or that the rack is otherwise stabilized.

The following table lists the items contained in the rack-mount kit that is provided with the routers.

Table 2: Rack-Mount Kit

Quantity	Part Description
2	Rack-mount brackets
8	M4 x 0.7 x 6-mm Phillips flat-head screws

Procedure

Step 1 Install two rack-mount brackets to the router:

a) Determine which end of the chassis is to be located in the cold aisle:
   - If the router has port-side intake modules (fan modules and power modules with burgundy coloring), position the router so that its optical ports are in the cold aisle, and fans and power modules will be in the hot aisle.
   - If the router has port-side exhaust modules (fan modules and power modules with blue coloring), position the router so that its fan and power supply modules are in the cold aisle and optical ports will be in the hot aisle.

b) With the bracket ears facing toward the center of the chassis, position a front rack-mount bracket on the side of the chassis so that the four holes are aligned to four of the screw holes on the side of the chassis.
c) Use four M4 flat-head screws with 13.25 in-lbs (1.5 N-m) torque value to attach the bracket to the chassis.

Figure 9: Rack-Mount Brackets on Cisco 8101-32H-O Router—Port-Side Intake

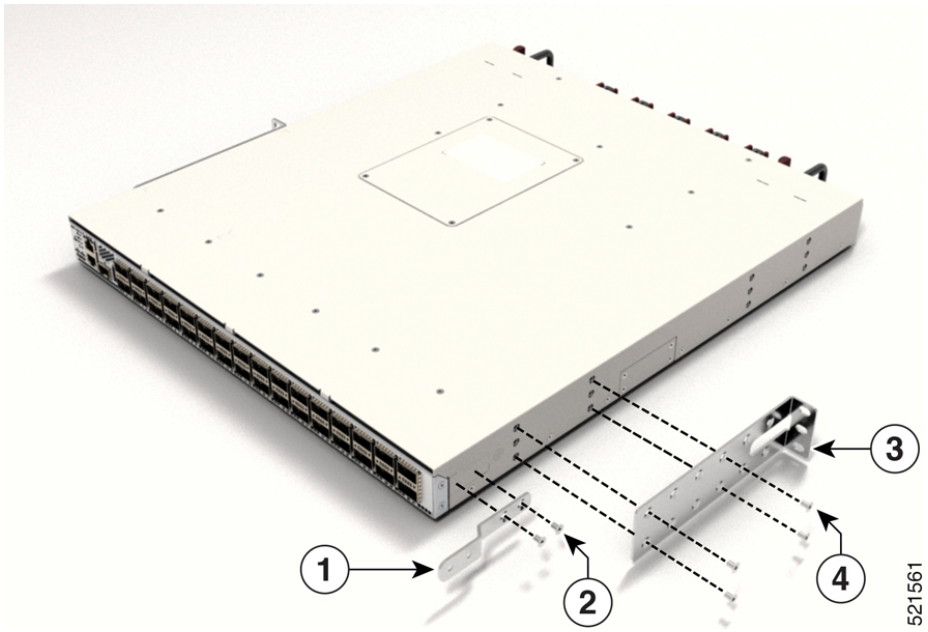
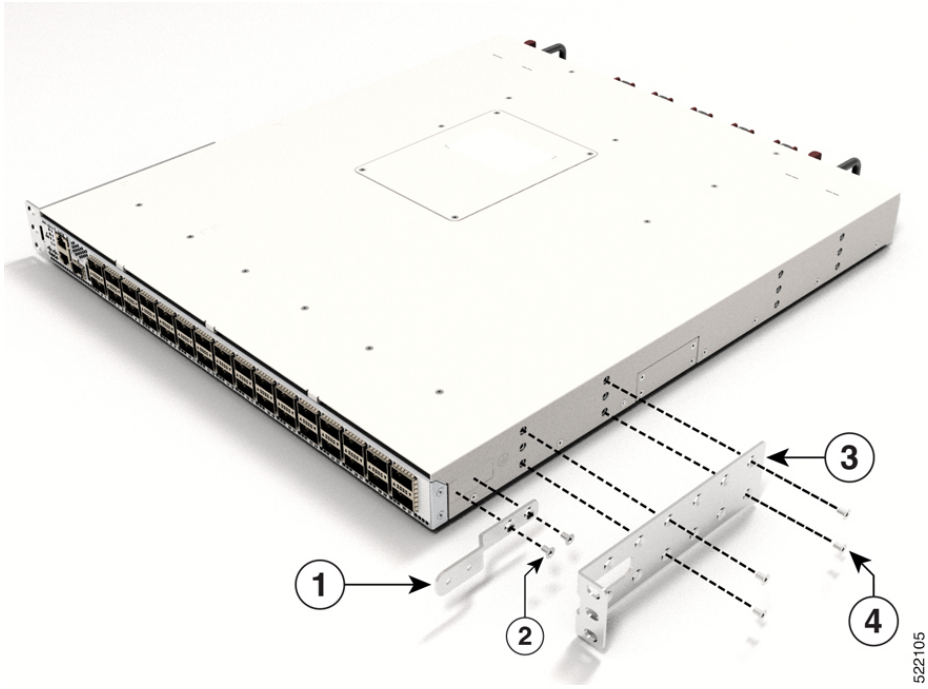
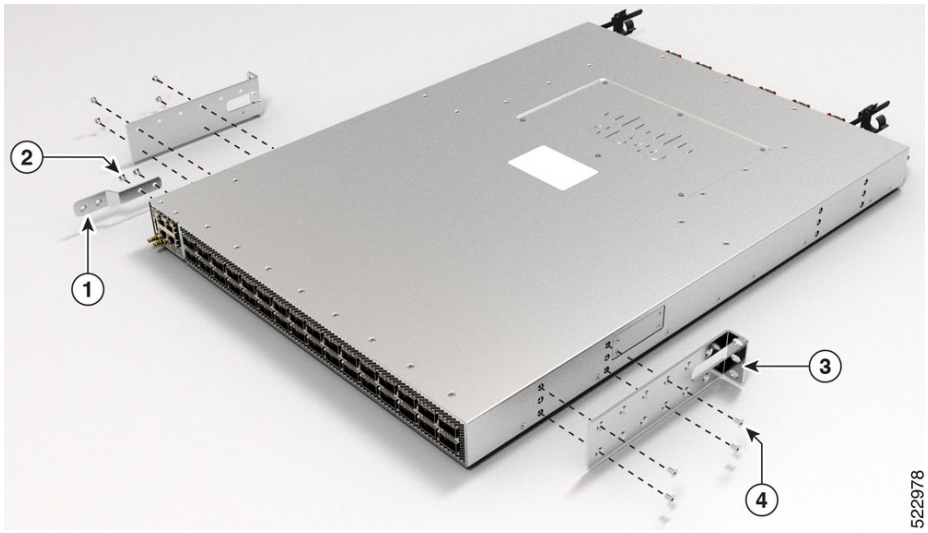


Figure 10: Rack-Mount Brackets on Cisco 8101-32H-O Router—Port-Side Intake



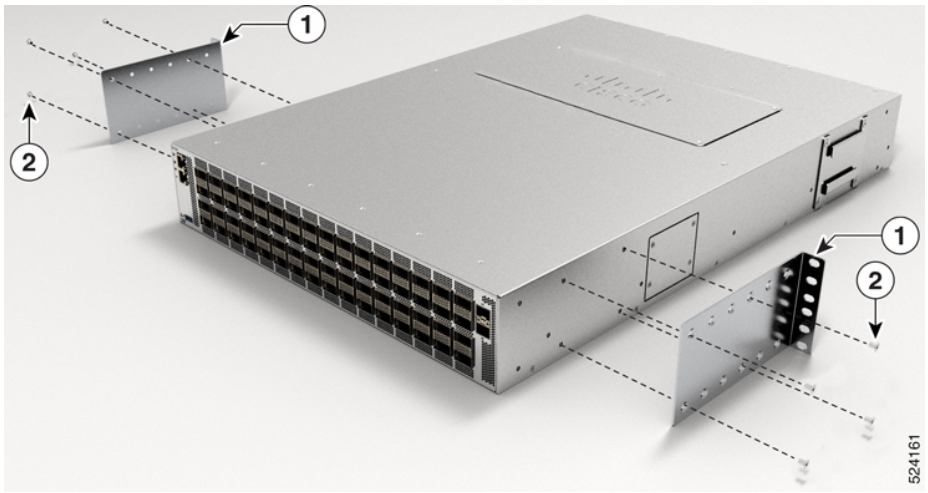
1	Grounding plate	2	M4 x 6-mm Phillips flat-head screws
3	Rack-mount brackets	4	M4 x 6-mm Phillips flat-head screws

Figure 11: Rack-Mount Brackets on Cisco 8111-32EH-O Router—Port-Side Intake



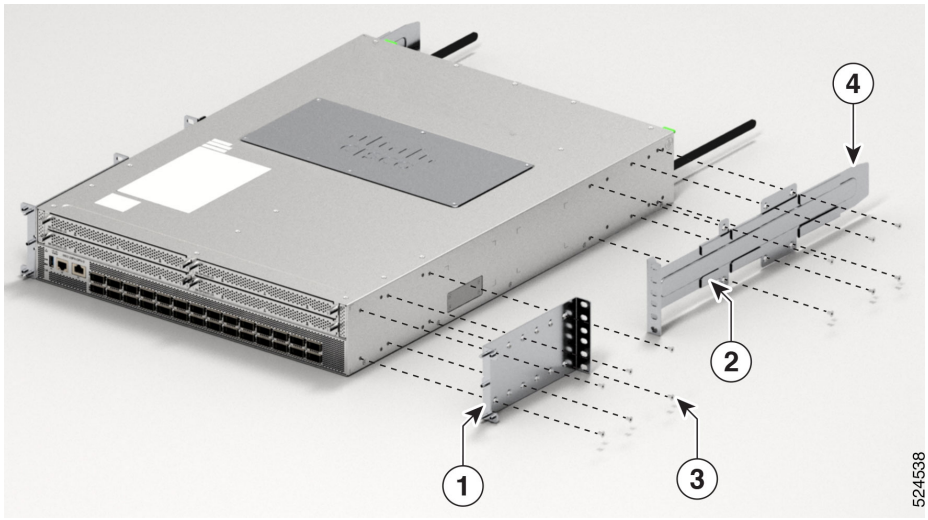
1	Grounding plate	2	M4 x 6-mm Phillips flat-head screws
3	Rack-mount brackets	4	M4 x 6-mm Phillips flat-head screws

Figure 12: Rack-Mount Brackets on Cisco 8122-64EH-O Router—Port-Side Intake



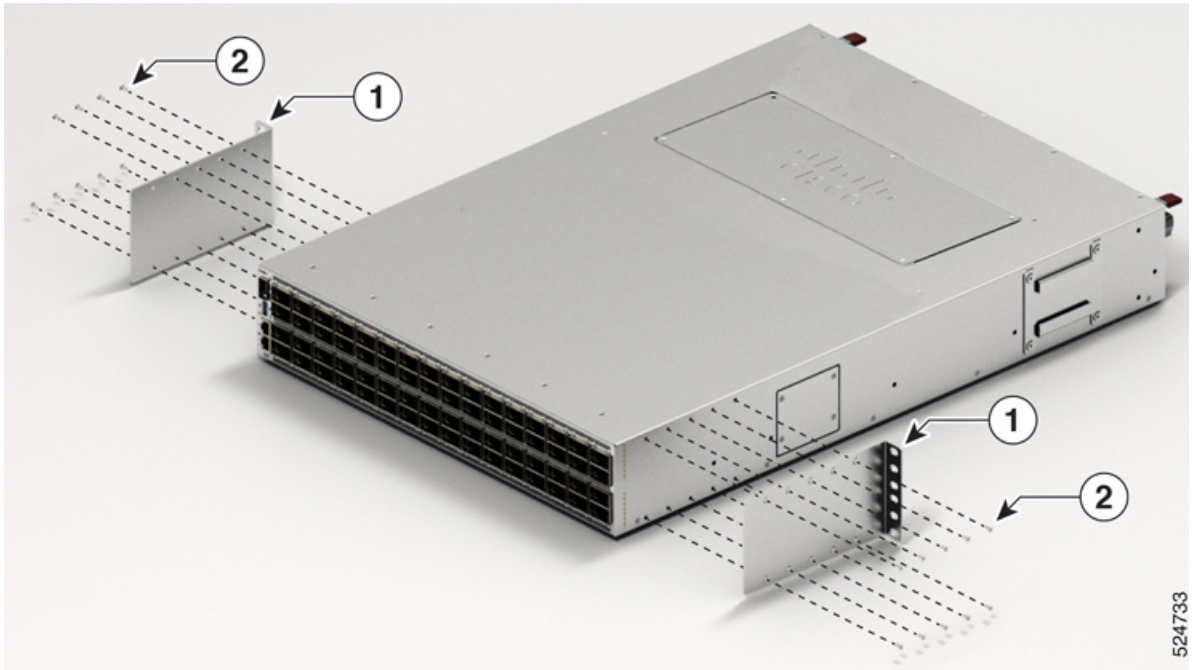
1	Grounding plate	2	M4 x 6-mm Phillips flat-head screws

Figure 13: Rack-Mount Brackets on Cisco 8102-28FH-DPU-O —Port-Side Intake



1	Rack-mount bracket	3	M4 x 6-mm Phillips flat-head screws
2	Slider fixed in rack-mount bracket	4	Rail slider

Figure 14: Rack-Mount Brackets on Cisco 8122-64EHF-O Router—Port-Side Intake



1	Grounding plate	2	• Nine M4 x 6-mm Phillips flat-head screws on the left side • Ten M4 x 6-mm Phillips flat-head screws on the right side

d) Repeat Steps 1b and 1c with the other rack-mount bracket on the other side of the router.

Step 2 Install the router onto the 2-post rack:

a) With the assistance of another person, lift the router into position between the two rack posts.

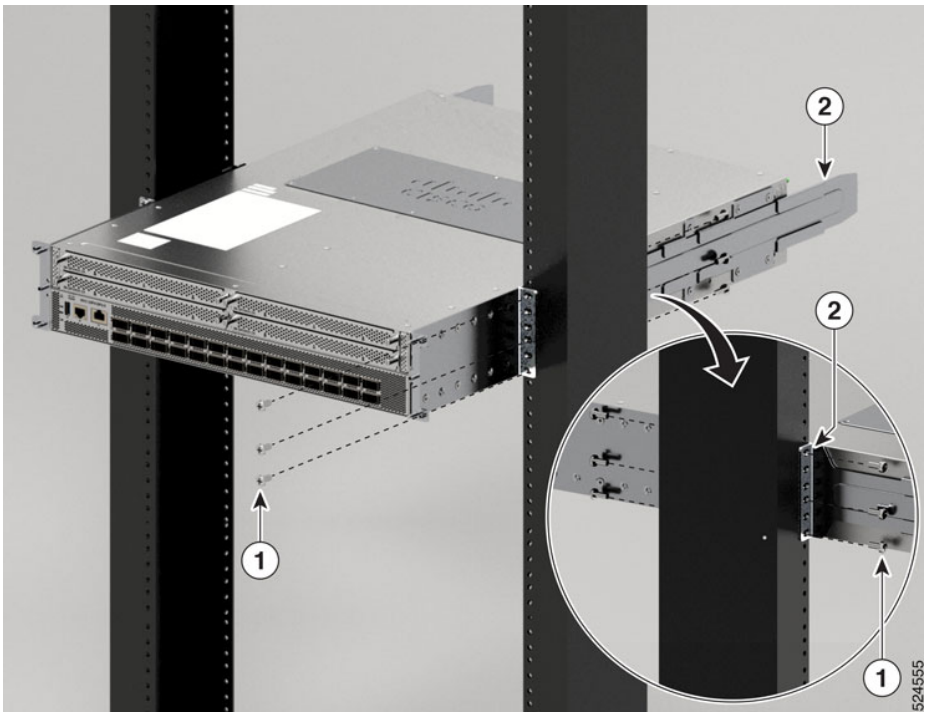
b) Move the router until the rack-mount brackets come in contact with two rack posts.

c) Hold the chassis at a level position while the second person inserts two screws (12-24 or 10-32, depending on the rack type) in each of the two rack-mount brackets (a total of four screws) and into the cage nuts or threaded holes in the vertical rack-mounting rails.

For Cisco 8102-28FH-DPU-O chassis:

1. Hold the chassis at a level position while the second person inserts three screws (12-24 or 10-32, depending on the rack type) in each of the two front rack-mount brackets (a total of six screws) and into the cage nuts or threaded holes in the vertical rack-mounting rails.
2. Attach the rear rack mount bracket and rail slider on both sides of the chassis You must first slide the rail into rear rack mount and then fix them in the assembled condition to the chassis.
3. Insert the two screws (12-24 or 10-32, depending on the rack type) in each of the two rear rack-mount brackets (a total of four screws) and into the cage nuts or threaded holes in the vertical rack mounting rails.

Figure 15: Cisco 8102-28FH-DPU-O



1	M4 x 6-mm Phillips flat-head screws	2	Slider fixed in rack-mount bracket

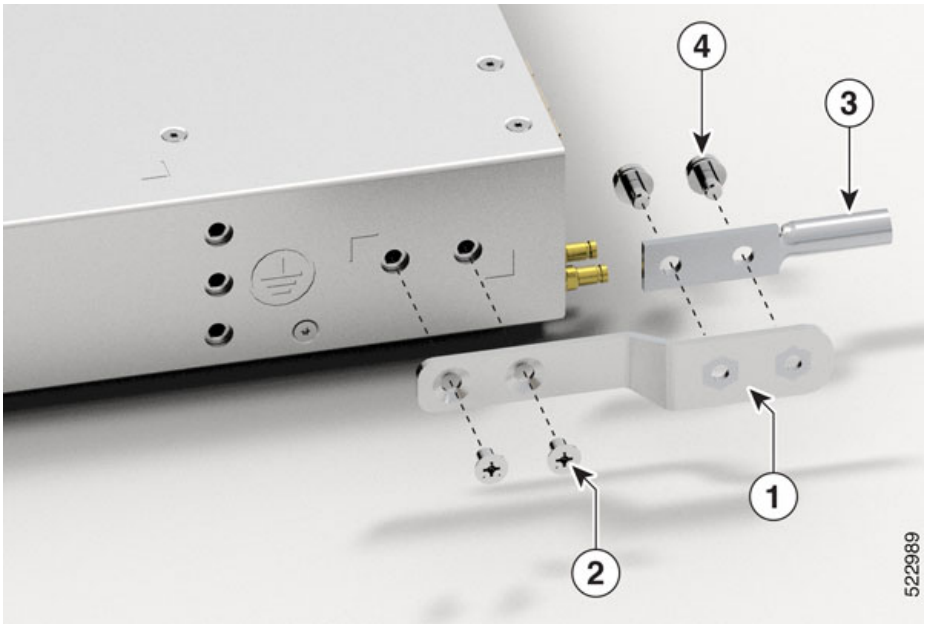
d) Tighten the 10-32 screws to 20 in-lb (2.26 N.m) or tighten the 12-24 screws to 30 in-lb (3.39 N.m).

Rack-Mount the Cisco 8111-32EH-O Router in a 4-Post Guide Rail

Note The 4-post guide rail is designed only for a 19-inch, Electronic Industries Alliance (EIA) rack with square-hole vertical rails.

1. Install the ground lug to the chassis.

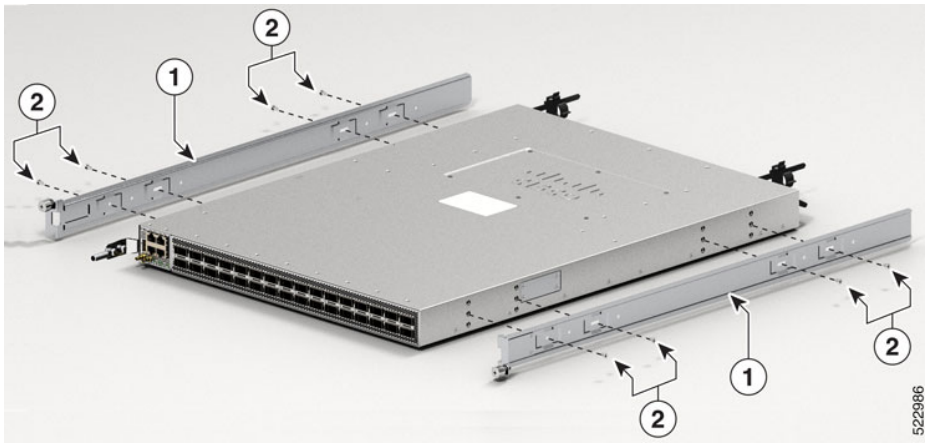
Figure 16: Install the Ground Lug



1	Grounding plate	3	Ground lug
2	M4 x 6-mm Phillips flat-head screws	4	Captive screws

2. Install the side brackets on the left-side and right-side of the chassis.

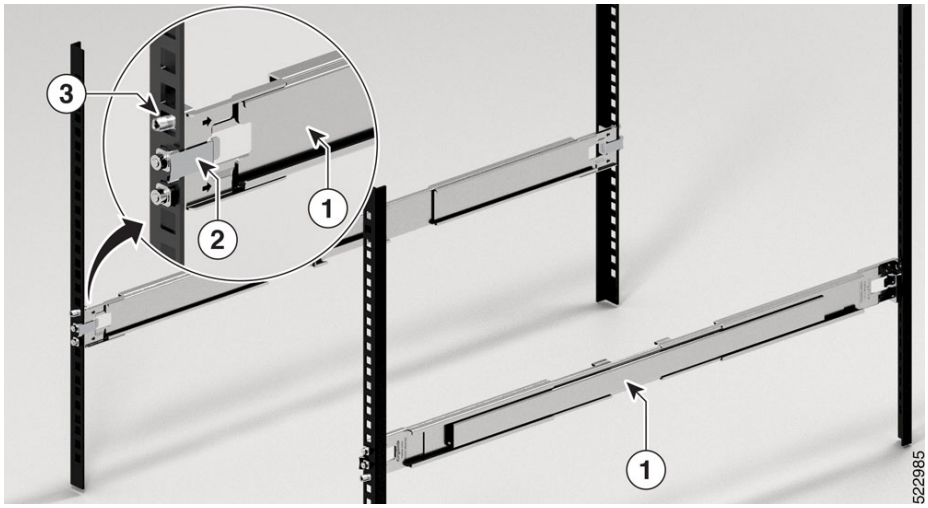
Figure 17: Install Side Brackets to the Chassis



1	Side brackets	2	M4 x 6-mm Phillips flat-head screws

3. Secure the slide rails to each side of the square-hole vertical rails by using the latch.

Figure 18: Secure Slide Rails with the Latch

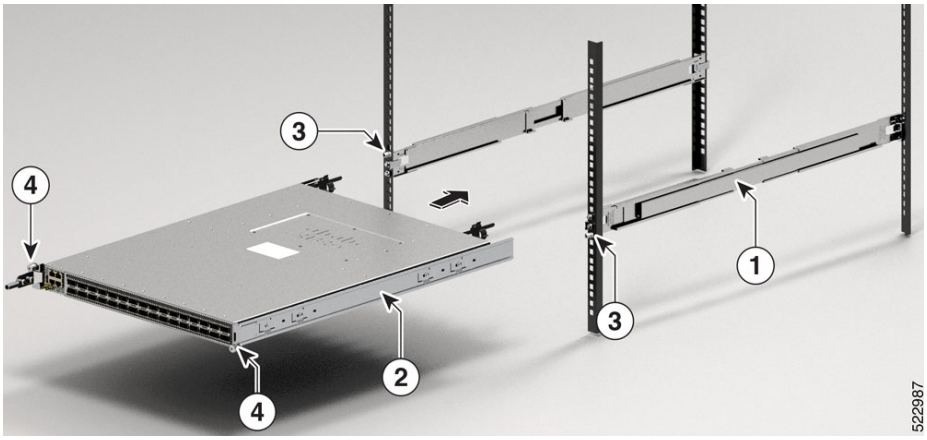


1	Slide rails	2	Latch
3	Thread for captive screws		

Note The two slide rails are identical and can be installed to either left or right vertical rails in any orientation.

4. Slide the chassis into the mounted rack.

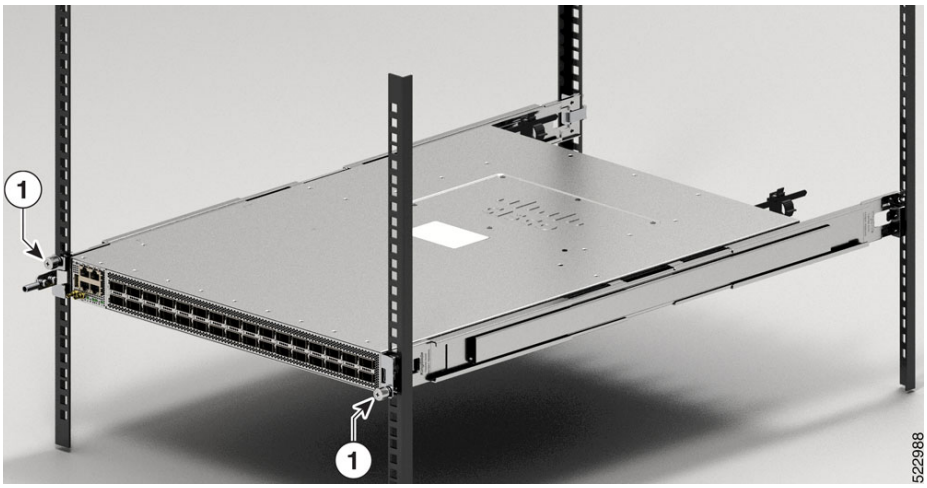
Figure 19: Slide Chassis into the Rack



1	Slide rails	2	Chassis with side brackets
3	Thread for captive screws	4	Captive screws

5. Tighten captive screws on front bracket (on each side) to secure chassis to the rack. Tighten the screws to a torque value of 14 in-lbs (1.58 N-m).

Figure 20: Tighten Captive Screws on the Front of the Chassis



1	Captive screws

Installing a Cable Management Bracket

This procedure is applicable to these routers:

- Cisco 8122-64EH-O
- Cisco 8122-64EHF-O

Note The cable management brackets for Cisco 8122-64EH-O chassis supports only optics cables.

To install a cable-management bracket, follow these steps:

Procedure

Step 1 Attach an ESD-preventive wrist or ankle strap and follow its instructions for use.

Step 2 Align the cable-management bracket with the two alignment pins on the rack-mount bracket.

Figure 21: Cable-Management Bracket Installation and Removal on Cisco 8122-64EH-O Router

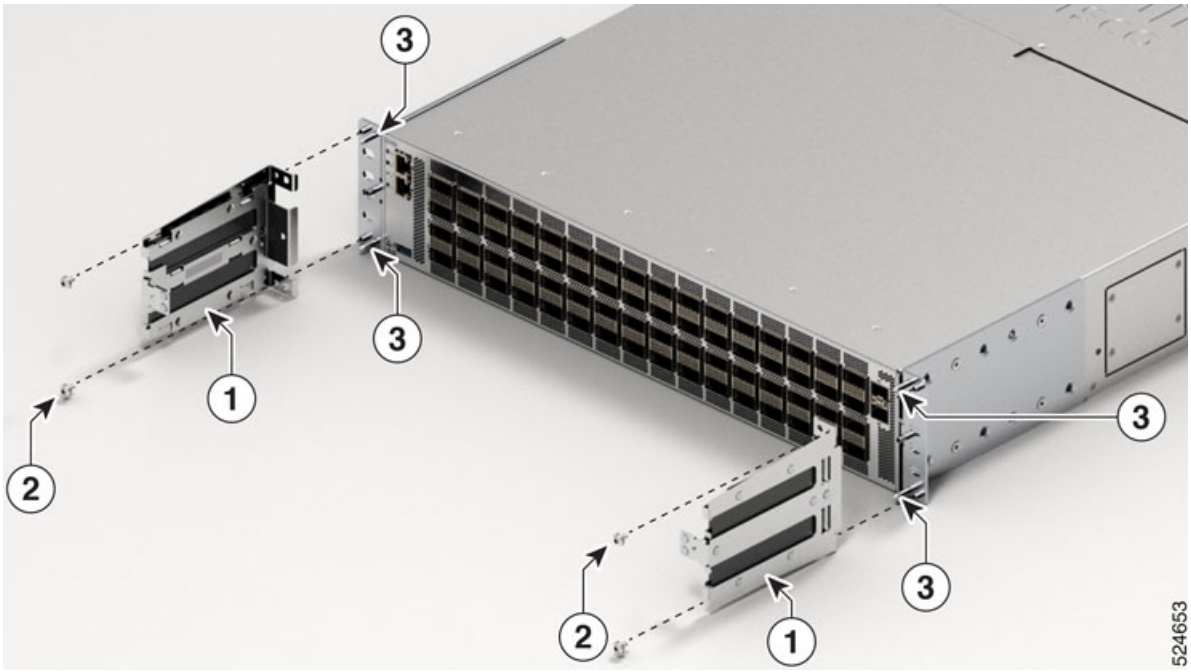
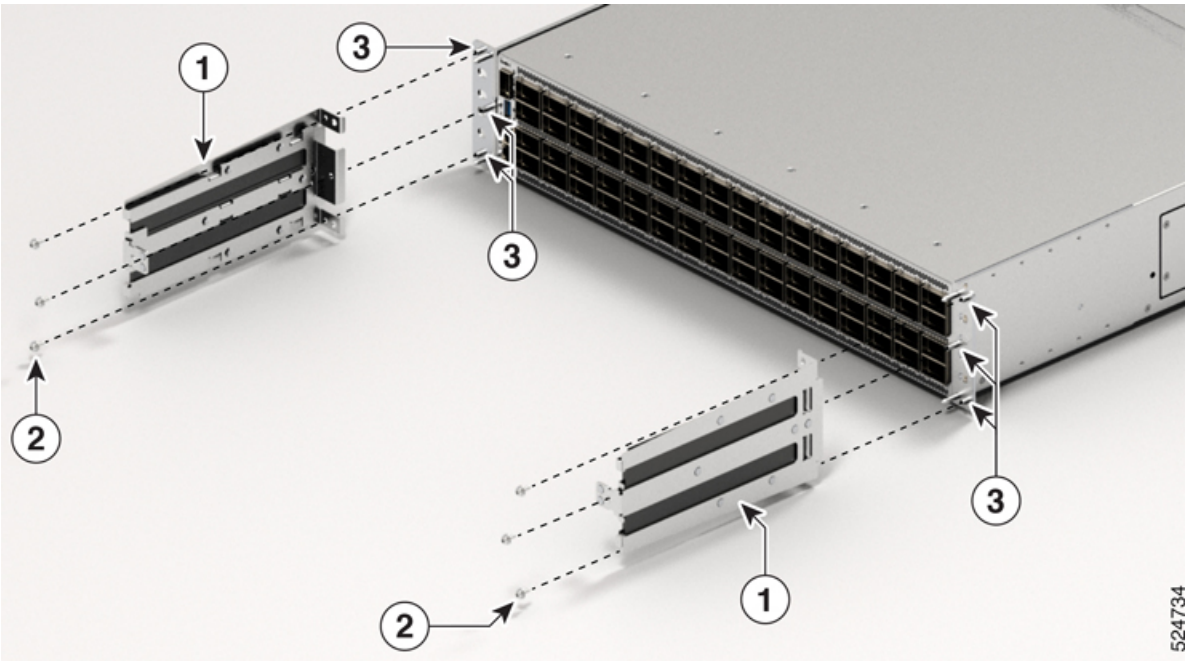


Figure 22: Cable-Management Bracket Installation and Removal on Cisco 8122-64EHF-O Router



1	Cable-Management Bracket	2	Securing Screws - M3 x 8mm pan-head screws
3	Alignment Pins		

Step 3 Secure the cable management bracket with the screws provided in the cable management kit.

Step 4 Connect all the cables to the intended ports and pass them through the cable management bracket in an organized manner.

Ground the Chassis

Warning **Statement 1101—**Connected To Grounded Outlet

In the Scandinavian countries (Denmark, Finland, Iceland, Norway, and Sweden) the appliance must be connected to a grounded outlet.

Note Statement 1101 is applicable to AC unit only.

Warning **Statement 1024—**Ground Conductor

This equipment must be grounded. To reduce the risk of electric shock, 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.

Warning **Statement 1046—**Installing or Replacing the Unit

To reduce risk of electric shock, when installing or replacing the unit, the ground connection must always be made first and disconnected last.

If your unit has modules, secure them with the provided screws.

Caution Grounding the chassis is required, even if the rack is already grounded. A grounding pad with two threaded holes is provided on the chassis for attaching either a grounding lug or a grounding plate used to attach the ground lug to the chassis. The ground lug must be NRTL-listed. In addition, a copper conductor (wires) must be used and the copper conductor must comply with NEC code for ampacity.

Caution When terminating the frame ground, do not use soldering lug connectors, screwless (push-in) connectors, quick connect connectors, or other friction-fit connectors.

Procedure

Step 1 Use a wire-stripping tool to remove approximately 0.75 inches (19 mm) of the covering from the end of the #6 AWG grounding cable.

Step 2 Insert the stripped end of the grounding cable into the open end of the grounding lug.

Step 3 Use the crimping tool to secure the grounding cable (#6 AWG cable) in the grounding lug.

Step 4 (Only Cisco 8102-28FH-DPU-O) Attach the grounding plate (L-bracket) to the rear of the chassis. Use two M3 x 6mm Phillips flat-head screws to fasten, applying a torque between 5 and 6.8 in-lbs (0.56 N-m to 0.76 N-m).

Step 5 Attach the ground cable:

Position the grounding lug against the grounding plate or the grounding point on the chassis to ensure solid metal-to-metal contact. Insert the provided screws through the holes in the grounding lug and into the grounding plate or grounding point.

Figure 23: Cisco 8102-64H-O Router Ground Lug

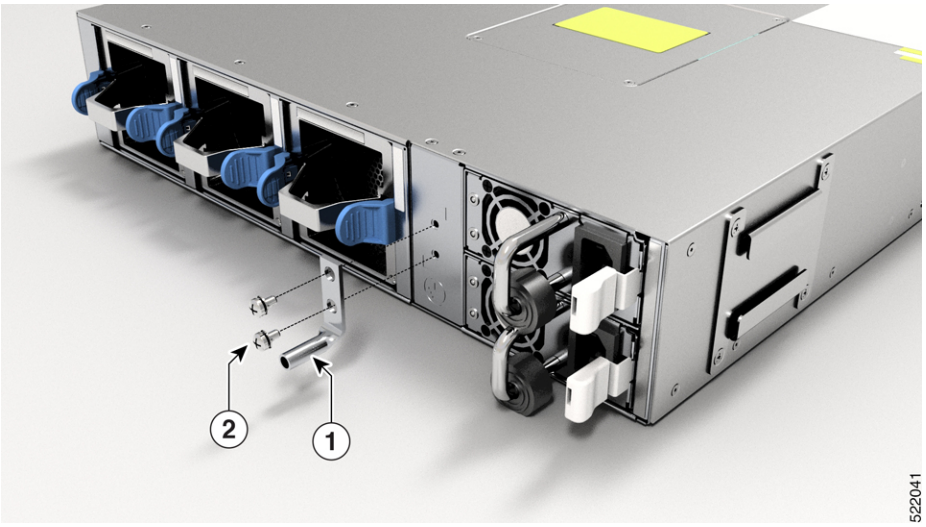


Figure 24: Cisco 8101-32H-O Ground Lug

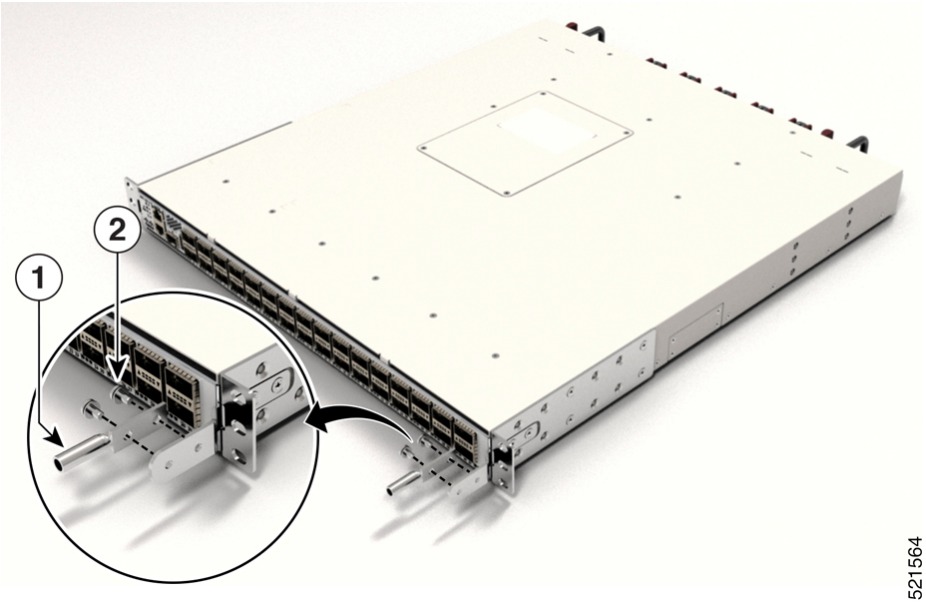


Figure 25: Cisco 8111-32EH-O Ground Lug

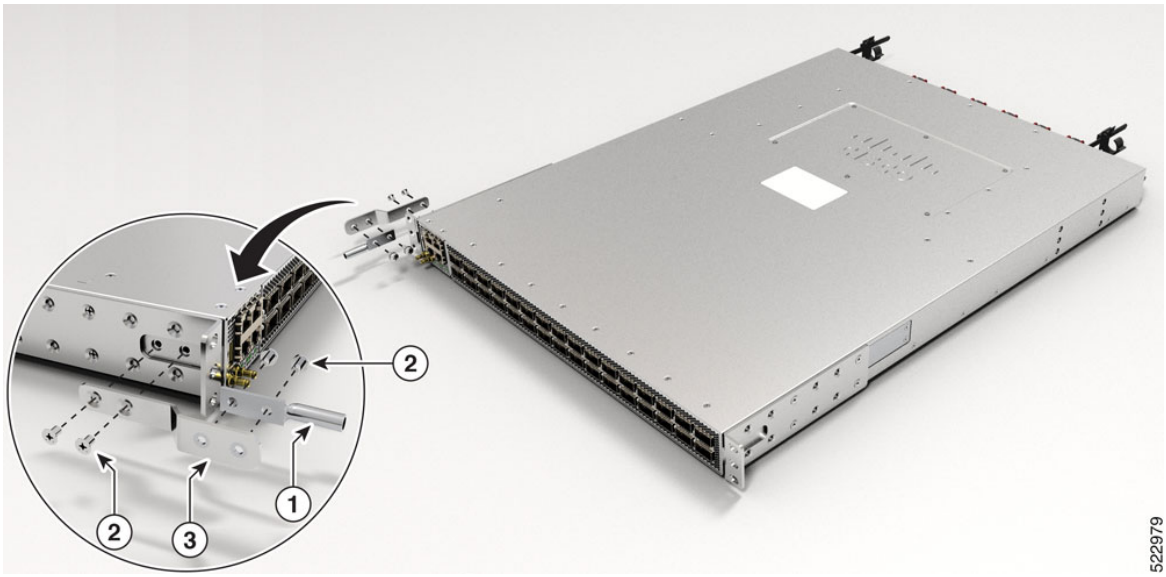
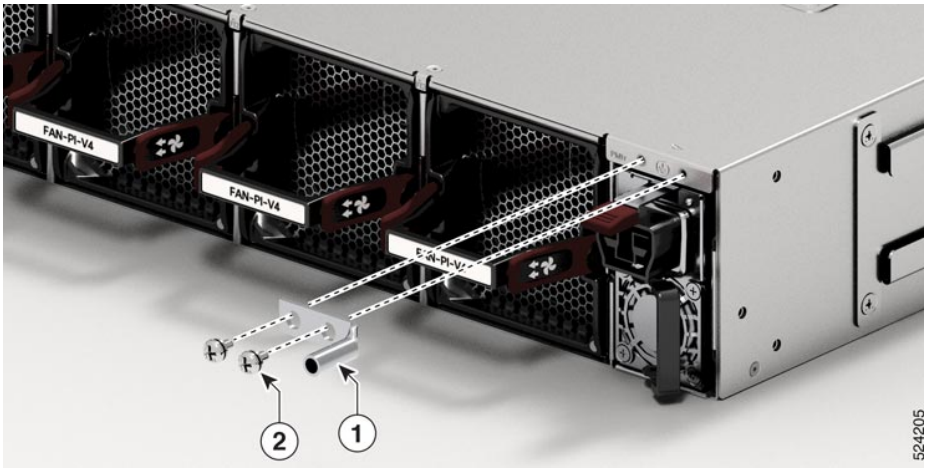


Figure 26: Cisco 8122-64EH-O Ground Lug



1	Grounding lug	2	M4 x 6mm pan-head screws
3	Grounding plate		

Figure 27: Cisco 8102-28FH-DPU-O Ground Lug

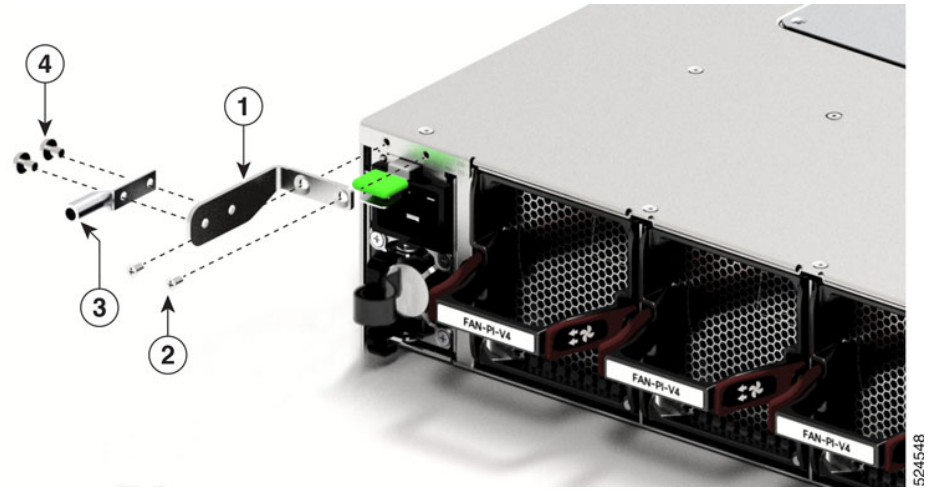
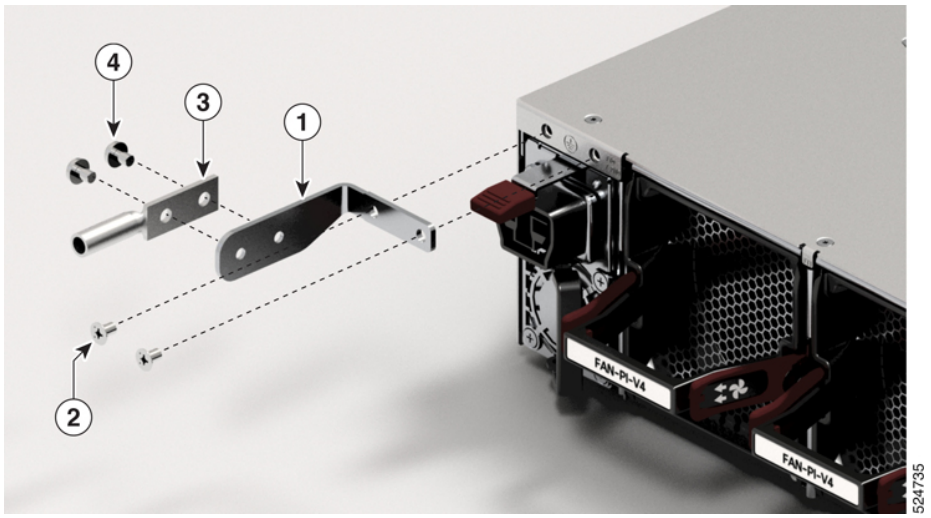


Figure 28: Cisco 8122-64EHF-O Ground Lug



1	Grounding plate (L Bracket)	2	M3 x 6mm flat-head screws
3	Grounding lug	4	M4 x 6mm pan-head screws

Step 6 Tighten the Phillips pan-head screws to torque value of 13.25 in-lbs (1.5 N-m).

Step 7 Ensure that the lug and cable do not interfere with other equipment.

Step 8 Prepare the other end of the grounding cable, and connect it to an appropriate grounding point in your site to ensure adequate earth ground.

Power Connection Guidelines

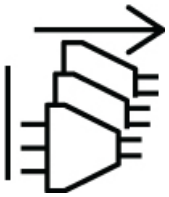
Warning **Statement 1091—**Installation by an Instructed Person

Only an instructed person or skilled person should be allowed to install, replace, or service this equipment. See statement 1089 for the definition of an instructed or skilled person.

There are no serviceable parts inside. To avoid risk of electric shock, do not open.

Warning **Statement 1028—**More Than One Power Supply

This unit might have more than one power supply connection. To reduce risk of electric shock, remove all connections to de-energize the unit.



Warning **Statement 1005—**Circuit Breaker

This product relies on the building's installation for short-circuit (overcurrent) protection. To reduce risk of electric shock or fire, ensure that the protective device is rated not greater than:

- 20 A (North America) and 16 A (Europe) circuit breaker for an AC-input power supply module.
- 83 A DC-rated circuit breaker for each input of a DC-input power supply module, for safety purposes - irrespective of whether the inputs are power from a single or separate DC sources.

Warning **Statement 1022—**Disconnect Device

To reduce the risk of electric shock and fire, a readily accessible disconnect device must be incorporated in the fixed wiring.

Warning **Statement 1003—**DC Power Disconnection

To reduce risk of electric shock or personal injury, disconnect DC power before removing or replacing components or performing upgrades.

Warning **Statement 1046—**Installing or Replacing the Unit

To reduce risk of electric shock, when installing or replacing the unit, the ground connection must always be made first and disconnected last.

If your unit has modules, secure them with the provided screws.

Warning **Statement 1022—**Disconnect Device

To reduce the risk of electric shock and fire, a readily accessible disconnect device must be incorporated in the fixed wiring.

Warning **Statement 1024—**Ground Conductor

This equipment must be grounded. To reduce the risk of electric shock, 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.

Warning **Statement 1033—**Safety Extra-Low Voltage (SELV)—IEC 60950/ES1–IEC 62368 DC Power Supply

To reduce the risk of electric shock, connect the unit *only* to a DC power source that complies with the SELV requirements in the IEC 60950-based safety standards or the ES1 requirements in the IEC 62368-based safety standards.

For DC power supply units:

- All power connection wiring should conform to the rules and regulations prescribed by the National Electrical Code (NEC), as well as local codes, if any.
- The DC return must remain isolated from the system frame and the chassis (DC-I).

  The color coding of the source DC power cable leads depends on the color coding of the site DC power source. Typically, green or green and yellow stripes indicate that the cable is a ground cable. Since there is no color code standard for source DC wiring, you must ensure that the power cables are connected to the DC-input power supply terminal block in the proper + and - polarity.

  In some cases, the source DC cable leads might have a positive (+) or a negative (–) label. This label is a relatively safe indication of polarity, but you must verify the polarity by measuring the voltage between the DC cable leads. When measuring, ensure that the positive lead and the negative lead always match the "+" and "-" labels on the DC-input power supply terminal block, respectively.
- DC power cables use the M-CRPS connector at the power supply end.
- The circuit must be protected by a dedicated two-pole DC-rated circuit breaker.

  The circuit breaker is considered to be the disconnect device and must be easily accessible. For DC-input power supply units with multiple inputs, each DC input must be protected by a dedicated DC-rated circuit breaker or a fuse.

The circuit breaker or fuse should be sized according to the power supply input rating and local or national code requirements.

- If the DC inputs are powered from separate sources, the cables must be wired straight across to their respective sources and terminals.

  Crossed cables in a setup where the DC source has floating outputs means that no damage will occur, but the LEDs will not light up, and the module will not operate.

  Crossed cables in a setup with a positive ground or a negative ground power system constitute a severe safety hazard that includes causing electric shock and generating excessive EMI and RFI.

Power Supply Restrictions and Considerations

Observe the following guidelines and limitations:

- Use one type of power supply in a router.
- The power supply type that is used in the router depends on the type and configuration of the transceivers installed in it.
- Do not install a mix of AC and DC power supplies in a router.
- The airflow direction must be the same for all power supply and fan modules in the router.
- The system requires two power supply units for redundancy.

Power Supply Unit Input and Output Ranges

Table 3: Electrical Ratings at Low Line, High Line, Low Voltage, and High Voltage Applications

AC, DC, and HVPI Power Supply Unit PIDs	Supported Routers	Input Voltage	Input Current (Max)	Input Frequency	Output Power
PSU650W-ACPI PSU650W-ACPE	Cisco 8102-64H-O Cisco 8101-32H-O	100-240V	7.6 – 3.65A	50-60Hz	650W (at 100-240V)
PSU2KW-ACPI	Cisco 8101-32FH-O Cisco 8111-32EH-O	100-127V AC 200-240V AC	12A	50-60Hz	1000W (at 100-127V) 2000W (at 200-240V)
PSU2KW-HVPI For AC high line applications	Cisco 8101-32FH-O	200V-277V AC	12A	50-60Hz	2000W (at 200V-277V)
PSU2KW-HVPI For AC low line applications	Cisco 8101-32FH-O	100V - 120V AC	12A	50-60Hz	1000W (at 100V - 120V)

AC, DC, and HVPI Power Supply Unit PIDs	Supported Routers	Input Voltage	Input Current (Max)	Input Frequency	Output Power
PSU2KW-HVPI For HVDC applications	Cisco 8101-32FH-O	240V - 380V DC	12A	NA	2000W (at 240V - 380V DC)
PSU3KW-HVPI	Cisco 8111-32EH-O Cisco 8122-64EH-O Cisco 8122-64EHF-O	100V - 120V AC 200V - 277V AC	16A 16A	50-60Hz	1500W (at 100V - 120V) 3000W (at 200V - 277V)
PSU3KW-HVPI For HVDC applications	Cisco 8111-32EH-O Cisco 8122-64EH-O Cisco 8122-64EHF-O	240V - 380V DC	14A	NA	3000W
PSU930W-DCPI PSU930W-DCPE	Cisco 8102-64H-O Cisco 8101-32FH-O Cisco 8101-32H-O	-48 to -60V DC	23A – 18A	NA	930W
PSU2KW-DCPI	Cisco 8111-32EH-O	-40 to -72V DC	55A	NA	2000W
UCSC-PSU1-2300W	Cisco 8102-28FH-DPU-O	100-120V 200-240V	14A (at 100-120V) 13A (at 200-240V)	50-60Hz	1200W (at 100-120V) 2300W (at 200-240V)

Connect AC Power to the Chassis

Caution The chassis relies on the protective devices in the building installation to protect against short circuit, overcurrent, and ground faults. Ensure that the protective devices comply with local and national electrical codes.

Note We recommend that you occupy both the power supply slots of the fixed port routers with power supplies. In case a power module fails, it is recommended to retain the failed power module in its slot until it is replaced with a new power module. This recommendation ensures that the system airflow is not impacted adversely, which may then result in the overheating of the router and its components.

Procedure

Step 1 Verify that the AC cable is installed in the correct AC source and outlet type.

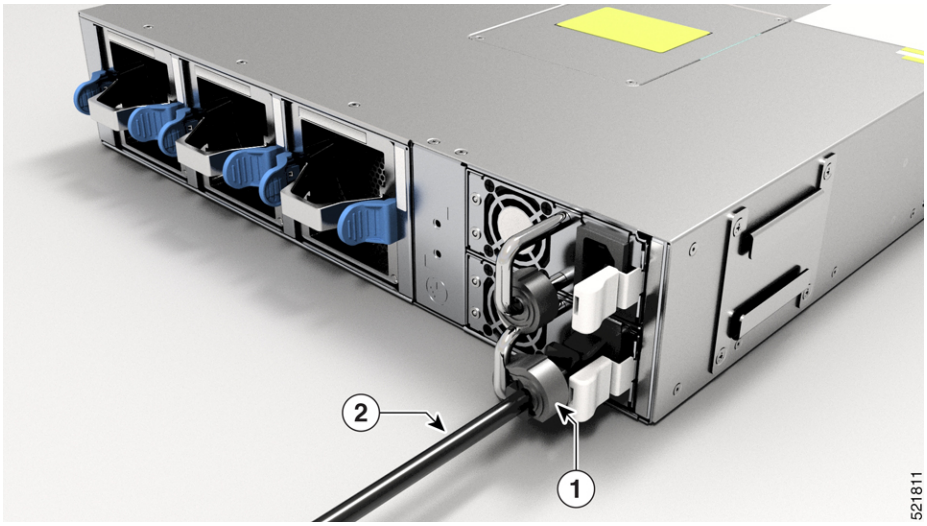
Step 2 Attach the AC power cable to the AC input of the AC Power module.

Step 3 Place the cable through the opening in the cable clamp or cable retainer.

Step 4 Slide the cable clamp or the cable retainer toward the plug.

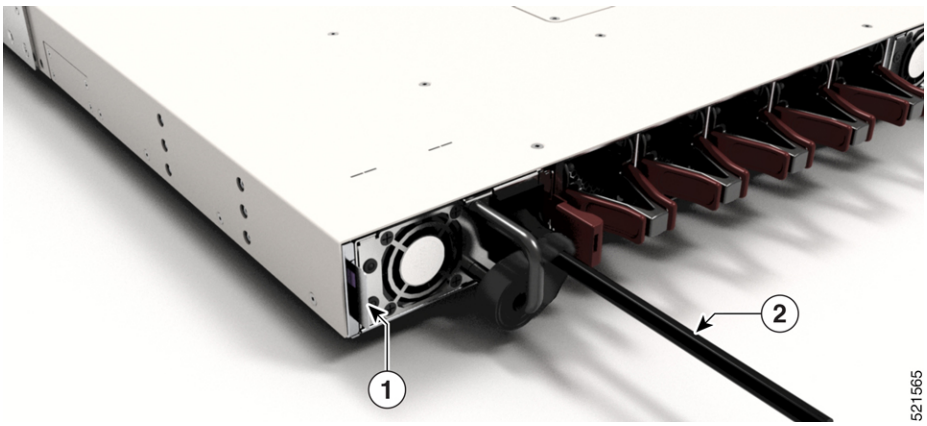
Step 5 Close the cable clamp or cable retainer on the shoulder of the power cable to secure the power cable.

Figure 29: Connecting AC Power - Cisco 8102-64H-O



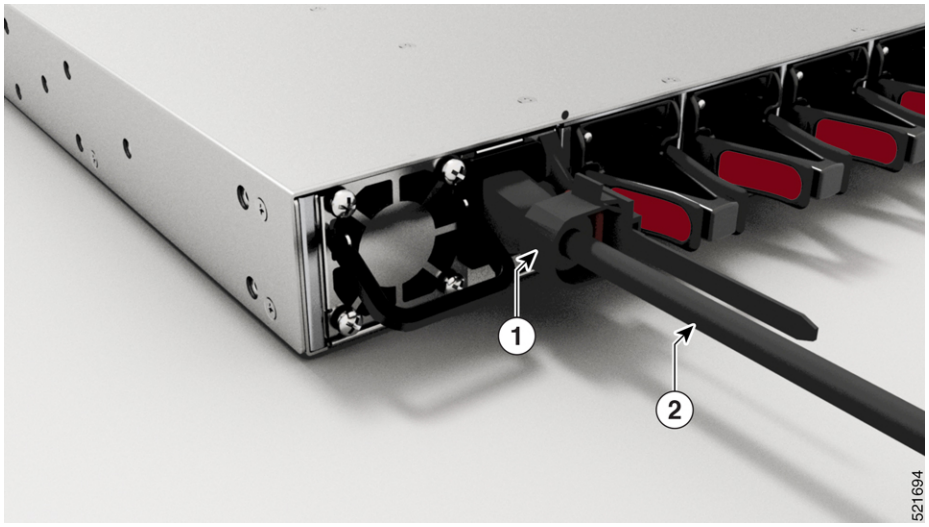
1	Cable retainer	2	AC power cable

Figure 30: Connecting AC Power - Cisco 8101-32H-O



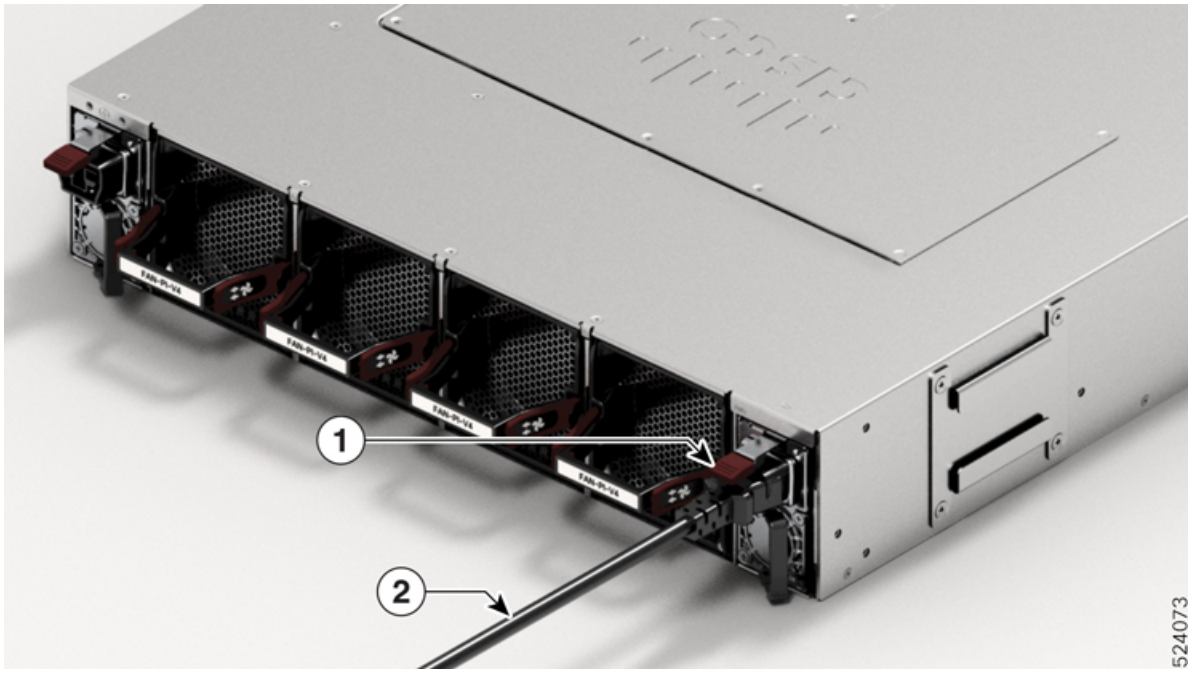
1	Tab	2	AC power cable

Figure 31: Connecting AC Power - Cisco 8111-32EH-O



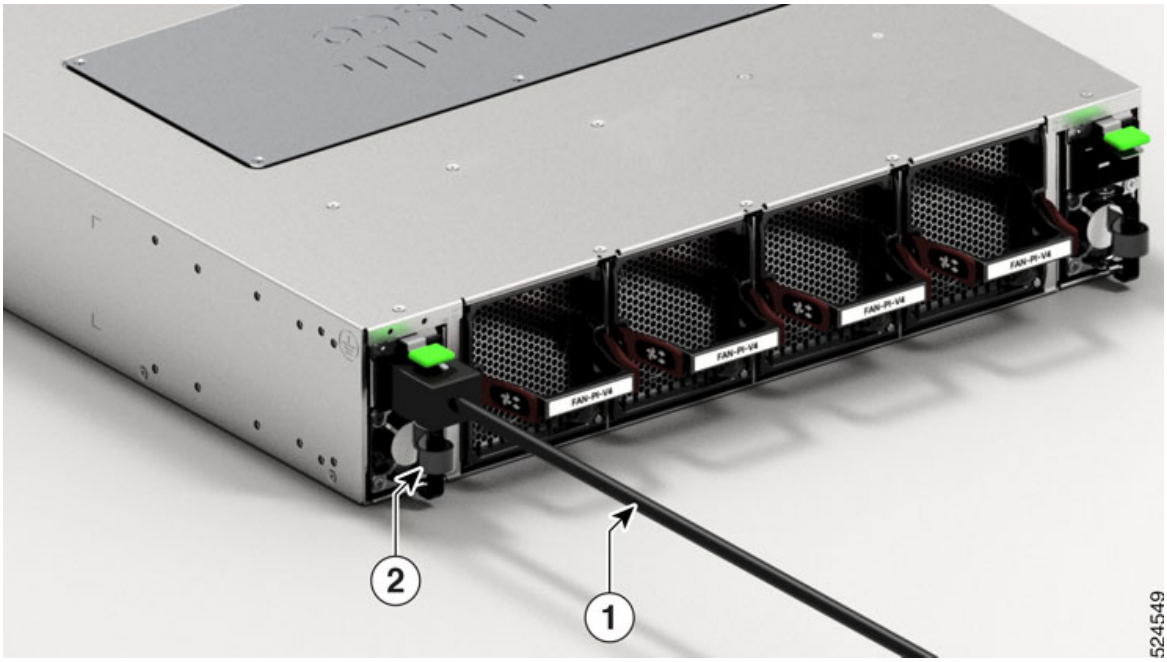
1	Cable clamp	2	AC power cable

Figure 32: Connecting AC Power - Cisco 8122-64EH-O



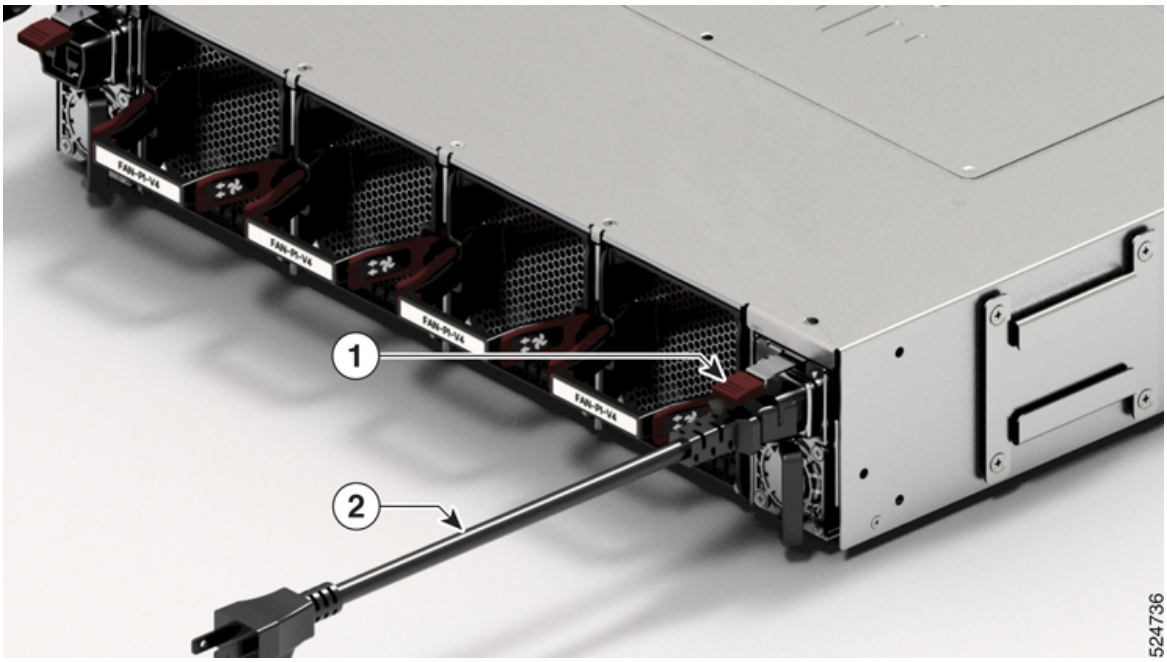
1	Tab	2	AC power cable

Figure 33: Connecting AC Power - Cisco 8102-28FH-DPU-O



1	AC power cable	2	Cable retainer

Figure 34: Connecting AC Power - Cisco 8122-64EHF-O



1	Tab	2	AC power cable

Note

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

Connect DC Power to the Chassis

Caution The chassis relies on the protective devices in the building installation to protect against short circuit, overcurrent, and ground faults. Ensure that the protective devices comply with local and national electrical codes.

Note We recommend that you occupy both the power supply slots of the fixed port routers with power supplies. In case a power module fails, it is recommended to retain the failed power module in its slot until it is replaced with a new power module. This recommendation ensures that the system airflow is not impacted adversely, which may then result in the overheating of the router and its components.

Procedure

Step 1 Verify that the correct fuse panel is installed in the top mounting space.

Step 2 Ensure that the DC circuit is powered down (either breaker turned off or fuse pulled) and proper lockout tag out procedures are followed. Use the cable supplied with the power supply. You can purchase power supply cord separately from Cisco.

Step 3 Dress the power according to local practice.

Note
For a 2KW DC PSU, use the cable (PID: PWR-2KW-DC-CBL) supplied with the power supply. You can purchase power supply cord separately from Cisco.

Step 4 Connect the office battery and return cables according to the fuse panel engineering specifications.

Step 5 In case of PSU2KW-DCPI, PSU930W-DCPI/DCPE PSU, insert the DC connector into the DC receptacle on the power supply.

Figure 35: Connecting DC Power - Cisco 8102-64H-O

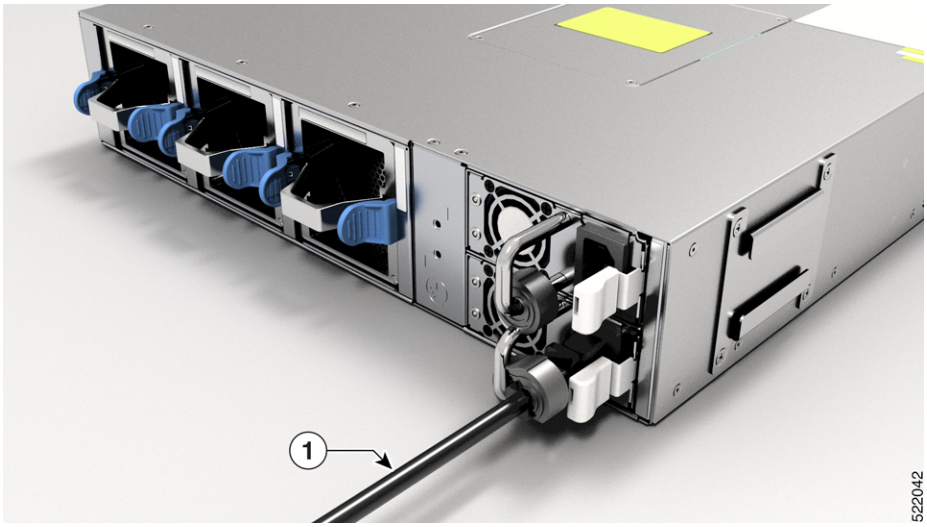


Figure 36: Connecting DC Power - Cisco 8111-32EH-O

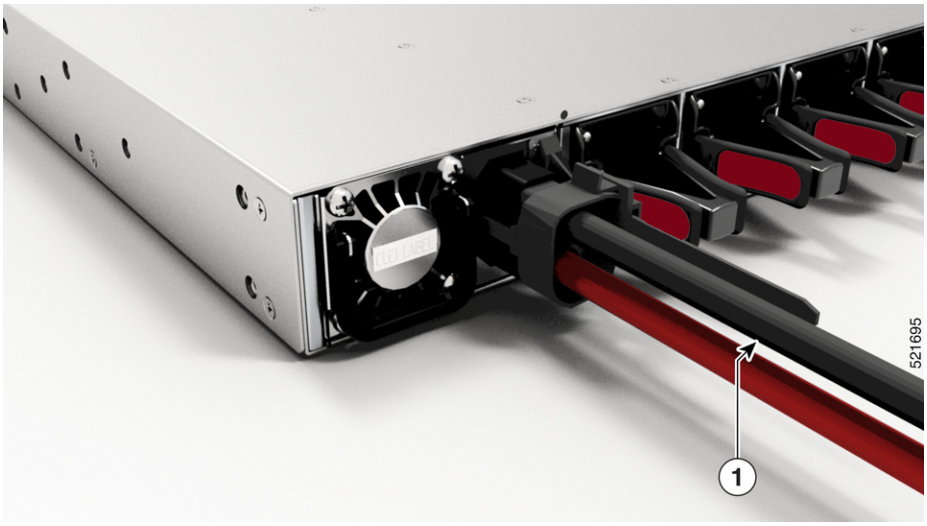
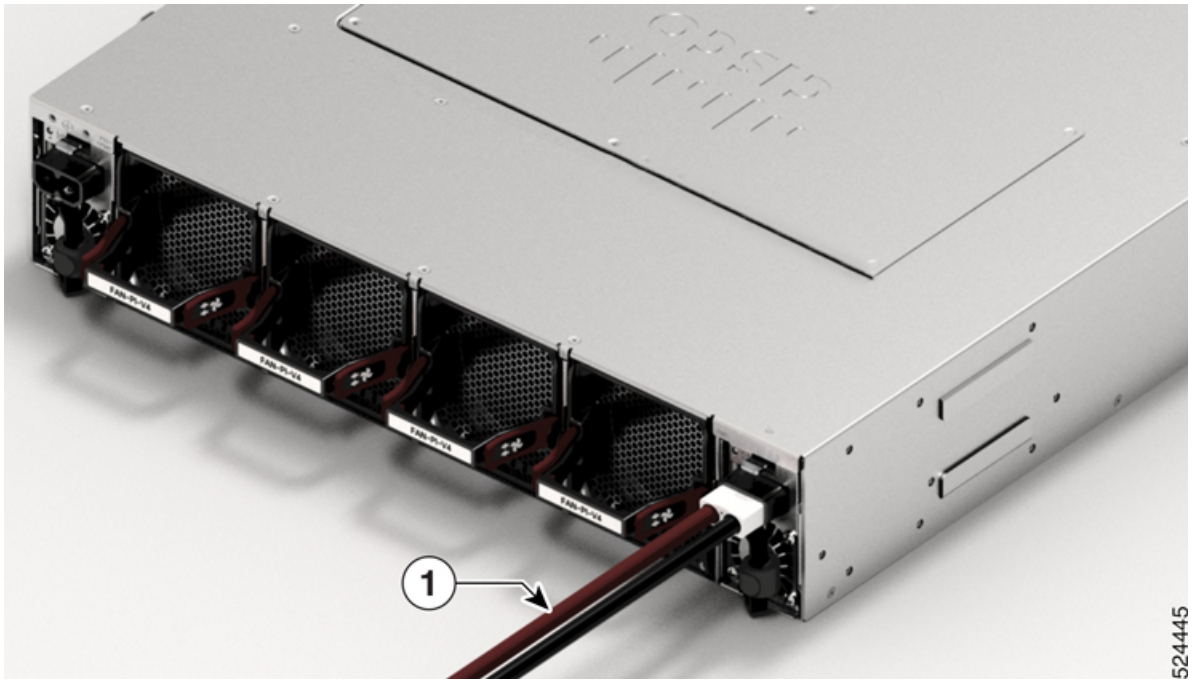
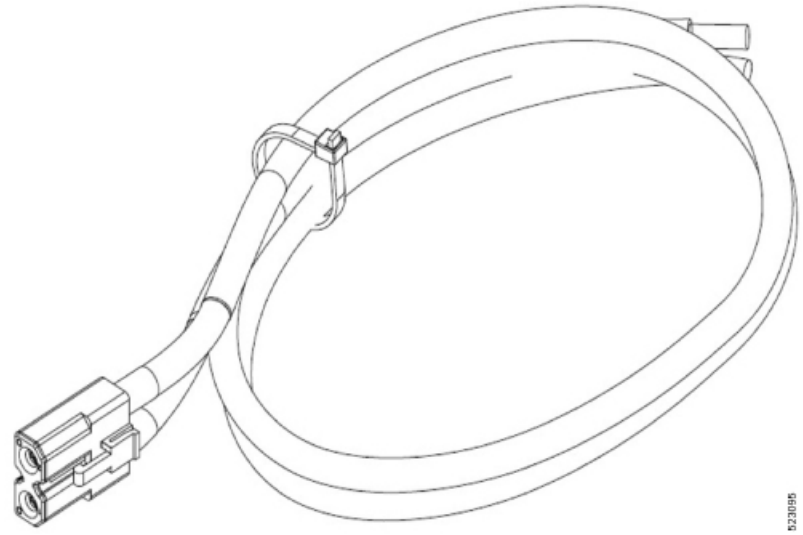


Figure 37: Connecting DC Power - Cisco 8122-64EH-O



1	DC power cable

Figure 38: DC Power Cable - PWR-2KW-DC-CBL



Note
Ensure that the locking mechanism has engaged to secure the cable.

Step 6 Turn on the circuit breaker at the power source.

Note

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

Connect High Voltage Power Supply Unit to Power Source

The high voltage PSU (PSU2KW-HVPI or PSU3KW-HVPI) accepts AC, HVAC, or HVDC input power. The HVPI power supply has Anderson power connector for Saf-D-Grid T-latch power cord that can be used for AC, HVAC, or HVDC power.

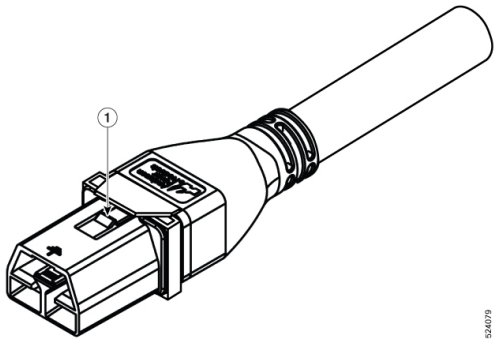
Procedure

Step 1 Choose your power source (AC, HVAC, or HVDC) and use the Saf-D-Grid T-latch power cord to connect to the PSU.

For power cord details, see Table 6: High-Voltage Input Power Cord Options for Cisco 8100 Series Router, on page 36.

Note
To remove the Saf-D-Grid power cord from the power supply, press the latch before pulling the power cord out.

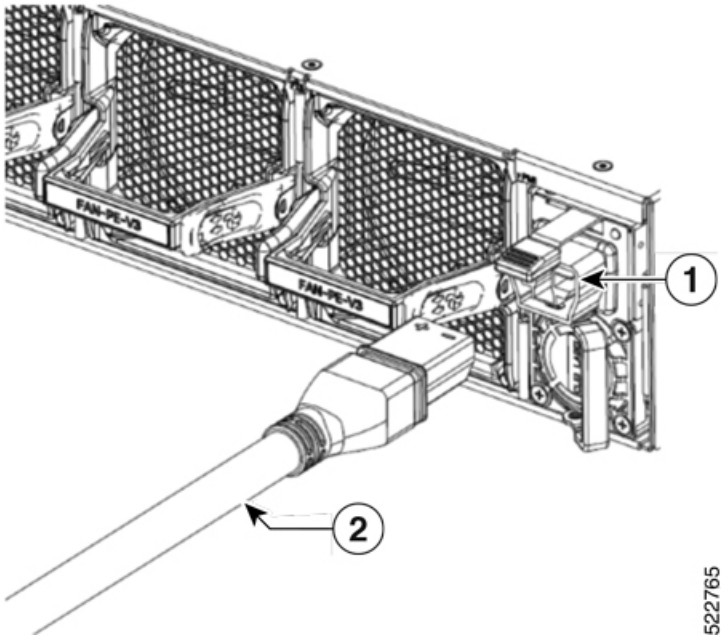
Figure 39: Latch on the Saf-D-Grid power cord



1	Latch

Step 2 Verify that the Saf-D-Grid plug is plugged in completely to secure the built-in retaining latch.

Figure 40: High Voltage (AC, HVAC, or HVDC) Power Connection



1	Anderson power connector	2	Saf-D-Grid T-latch power cord

Step 3 Turn on the circuit breaker for the AC, HVAC, or HVDC power source circuit.

AC-Input Power Cord Options

This table summarises the input and output power ranges for PSU high line applications:

Table 4: AC-Input Power Cord Options for Cisco 8100 Series Router

Locale	Part Number	Length	Power Cord Rating
Australia, New Zealand	CAB-AC-10A-ANZ	14 ft (4.26 m)	10A, 250 VAC
Brazil	CAB-AC-10A-BRZ	14 ft (4.26 m)	10A, 250 VAC
Britain	CAB-AC-10A-GBR	14 ft (4.26 m)	10A, 250 VAC
China	CAB-AC-10A-CHN	14 ft (4.26 m)	10A, 250 VAC
Denmark	CAB-AC-10A-DEN	14 ft (4.26 m)	10A, 250 VAC

Locale	Part Number	Length	Power Cord Rating
Europe	CAB-AC-10A-EU	14 ft (4.26 m)	10A, 250 VAC
Italy	CAB-AC-10A-ITA	14 ft (4.26 m)	10A, 250 VAC
Japan	CAB-AC-10A-JPN1	14 ft (4.26 m)	10A, 250 VAC
Japan	CAB-AC-10A-JPN2	14 ft (4.26 m)	10A, 250 VAC
Korea	CAB-AC-10A-KOR	14 ft (4.26 m)	10A, 250 VAC
North America	CAB-AC-10A-NA	14 ft (4.26 m)	13A, 125 VAC
Switzerland	CAB-AC-10A-CHE	14 ft (4.26 m)	10A, 250 VAC

Table 5: AC Input Power Cord Options for Cisco 8102-28FH-DPU-O Smart Switch

Locale	Part Number	Length	Power Cord Rating
North America	CAB-7513AC	14 ft (4.27 m)	20A, 125 VAC
Italy	CAB-7513ACI	14 ft (4.27 m)	16A, 250 VAC
Australia	CAB-7513ACA	14 ft (4.27 m)	15A, 250 VAC
America	CAB-AC-TWST-C19US	14 ft (4.27 m)	16A, 250 VAC
America	CAB-L620P-C19-US	14 ft (4.27 m)	20A, 250 VAC
Argentina	CAB-7513ACR	14 ft (4.27 m)	16A, 250 VAC
International	CAB-I309-C19-INT	13.5 ft (4.13 m)	16 A, 250 VAC
Europe	CAB-CEE77-C19-EU	13.15 ft (4.01 m)	16 A, 250 VAC
US	CAB-AC-STRT-C19US	13.5 ft (4.13 m)	16 A, 250 VAC
Brazil	CAB-EL224-C19-BR	14 ft (4.27 m)	16 A, 250 VAC
China	CAB-I309-C19-CH	4.015 m	16 A, 250 VAC

Table 6: High-Voltage Input Power Cord Options for Cisco 8100 Series Router

Locale	Part Number	Length	Power Cord Rating
Argentina	CAB-AC-16A-SG-AR	14 ft (4.26 m)	16A, 250 VAC
Australia	CAB-AC-16A-SG-AZ	14 ft (4.26 m)	16A, 250 VAC
Brazil	CAB-AC-16A-SG-BR	14 ft (4.26 m)	16A, 250 VAC
China	CAB-AC-16A-SG-CH CAB-AC-16A-CN	14 ft (4.26 m)	16A, 250 VAC
Europe	CAB-AC-16A-SG-EU	14 ft (4.26 m)	16A, 250 VAC
India	CAB-AC-16A-SG-IND	14 ft (4.26 m)	16A, 250 VAC
International/UK	CAB-AC-16A-SG-IN	14 ft (4.26 m)	16A, 250 VAC
Israel	CAB-AC-16A-SG-IS	14 ft (4.26 m)	16A, 250 VAC
Italy	CAB-AC-16A-SG-IT	14 ft (4.26 m)	16A, 250 VAC
Japan	CAB-AC-16A-SG-JPN	14 ft (4.26 m)	16A, 250 VAC
South Africa	CAB-AC-16A-SG-SA	14 ft (4.26 m)	16A, 250 VAC
Switzerland	CAB-AC-16A-SG-SW	14 ft (4.26 m)	16A, 250 VAC
South Korea	CAB-AC-16A-SG-SK	14 ft (4.26 m)	16A, 250 VAC
UK	CAB-AC-16A-SG-UK	14 ft (4.26 m)	16A, 250 VAC
North America (non locking) 110 VAC operation	CAB-AC-20A-SG-US	14 ft (4.26 m)	20A, 110 VAC
North America (locking) 125 VAC operation	CAB-AC-20A-SG-US1	14 ft (4.26 m)	20A, 125 VAC
North America (non locking) 200-240 VAC operation	CAB-AC-20A-SG-US2	14 ft (4.26 m)	20A, 250 VAC

Locale	Part Number	Length	Power Cord Rating
North America (locking) 200-240 VAC operation	CAB-AC-20A-SG-US3	14 ft (4.26 m)	20A, 250 VAC
North America 277 VAC operation	CAB-AC-20A-SG-US4	14 ft (4.26 m)	20A, 277 VAC
North America Cabinet Jumper Power Distribution unit (PDU)	CAB-AC-20A-SG-C20	14 ft (4.26 m)	20A, 250 VAC
North America, Ring Terminal source plug	CAB-HV-25A-SG-US2	14 ft (4.26 m)	20A, 300 VAC/500 VDC
International IEC/EU, Ring Terminal source plug	CAB-HV-25A-SG-IN2	14 ft (4.26 m)	20A, 300 VAC/500 VDC

High-Voltage Input AC Power Illustrations for Cisco 8100 Series Router

This section contains the AC high-voltage power cord illustrations, as described in the above table.

Figure 41: CAB-AC-16A-SG-AR Power Cord

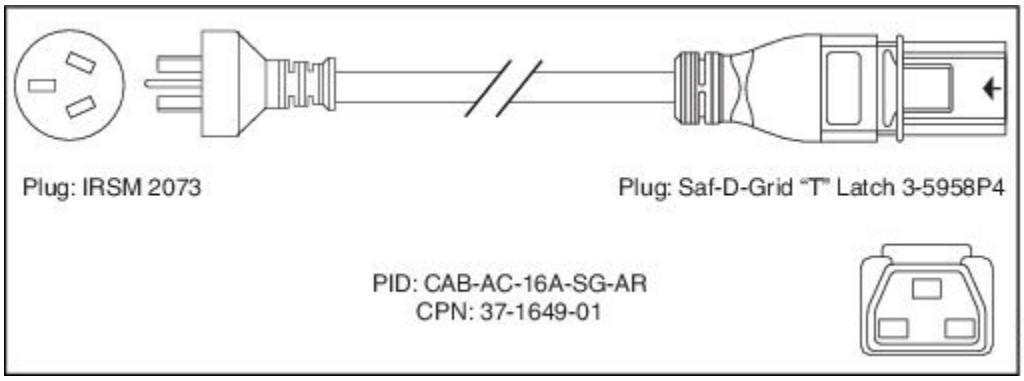


Figure 42: CAB-AC-16A-SG-AZ Power Cord

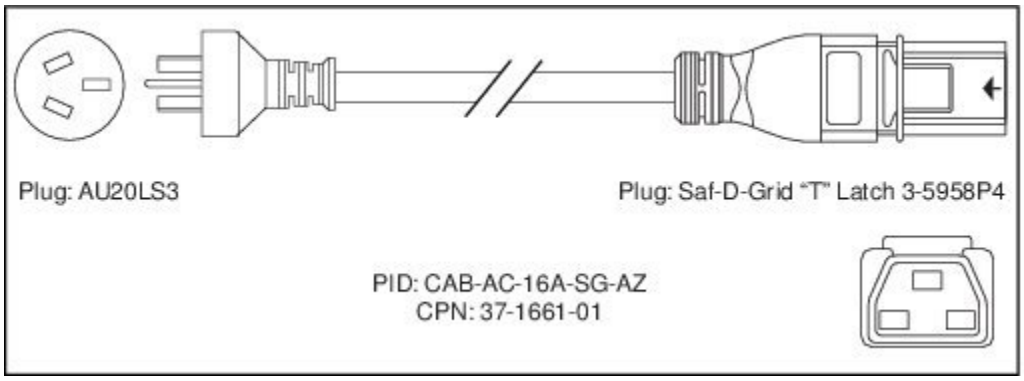


Figure 43: CAB-AC-16A-SG-BR Power Cord

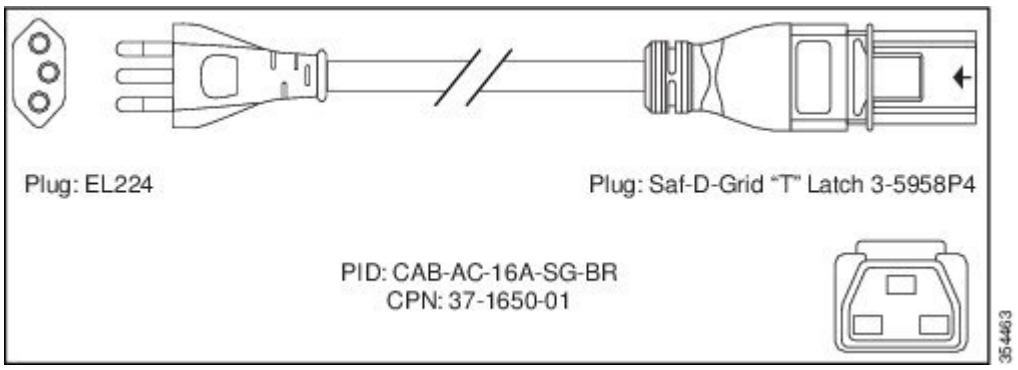


Figure 44: CAB-AC-16A-SG-CH Power Cord

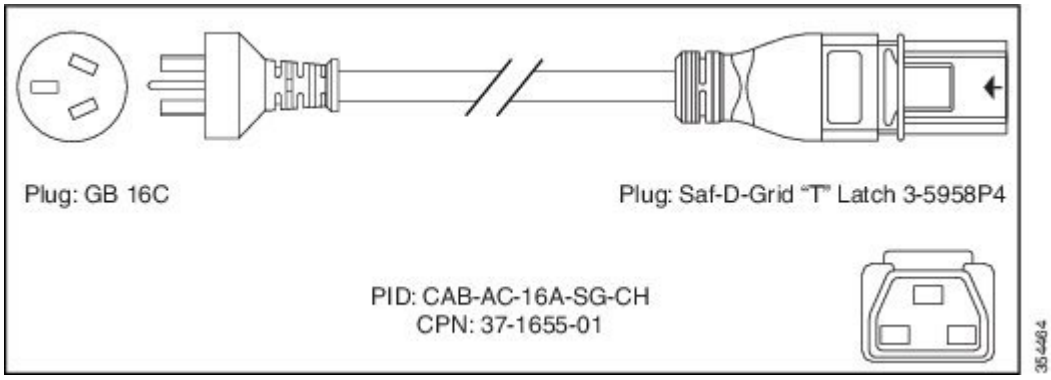


Figure 45: CAB-AC-16A-SG-EU Power Cord

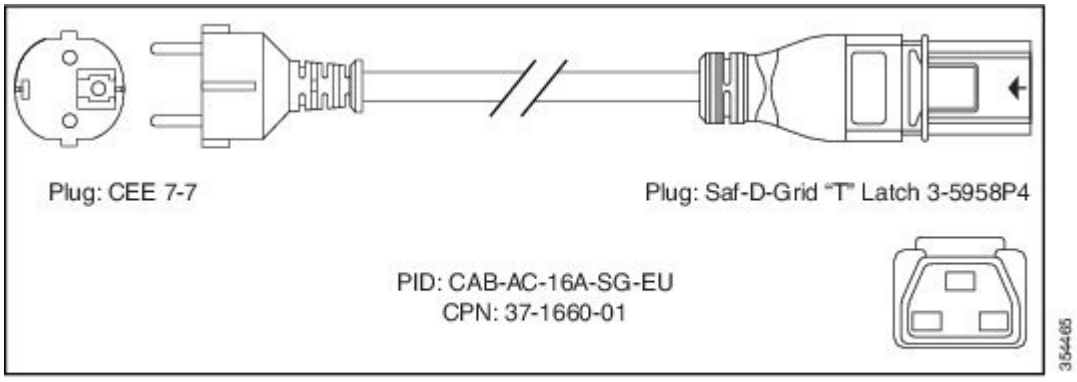


Figure 46: CAB-AC-16A-SG-IND Power Cord

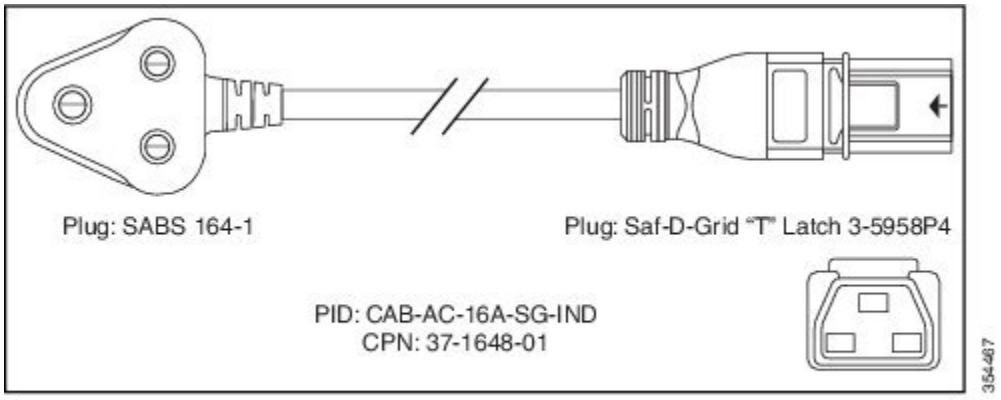


Figure 47: CAB-AC-16A-SG-IN Power Cord

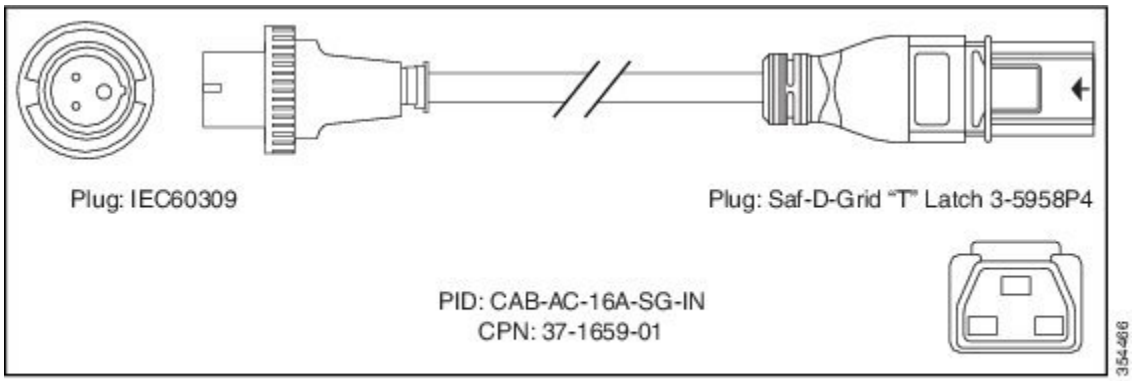


Figure 48: CAB-AC-16A-SG-IS Power Cord

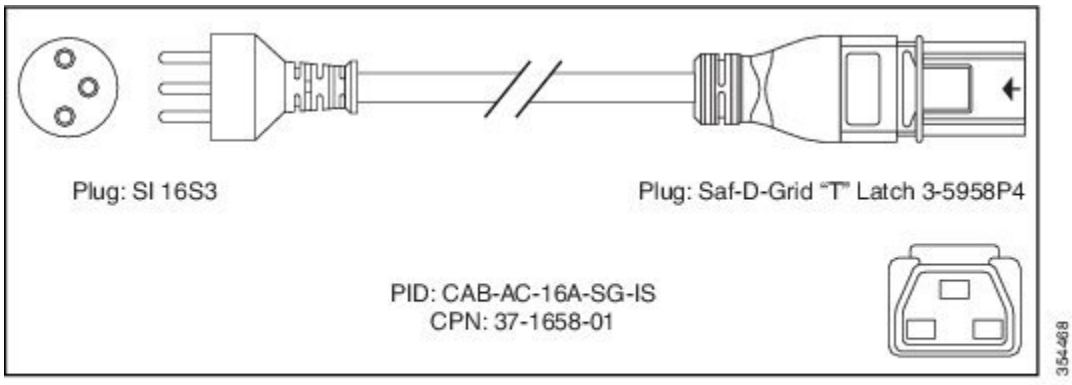


Figure 49: CAB-AC-16A-SG-IT Power Cord

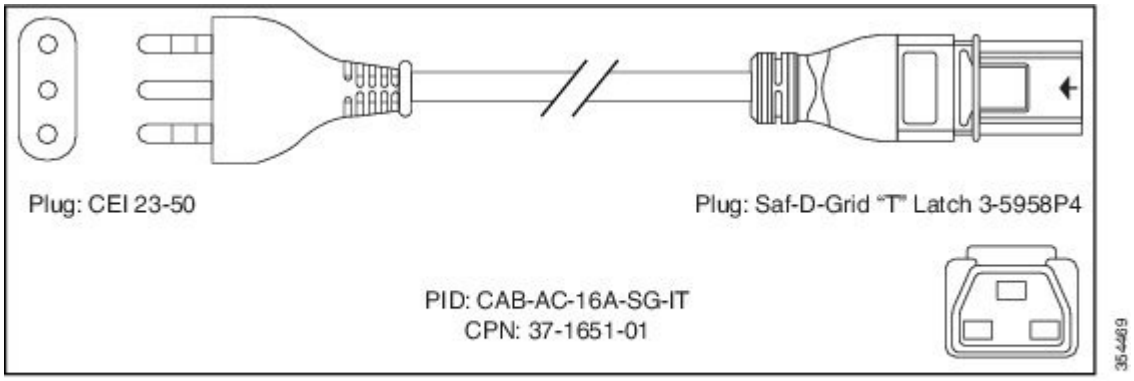


Figure 50: CAB-AC-16A-SG-JPN Power Cord

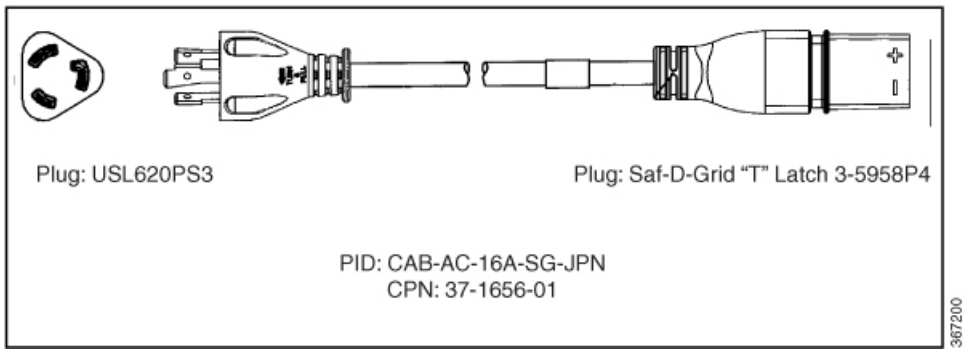


Figure 51: CAB-AC-16A-SG-SA Power Cord

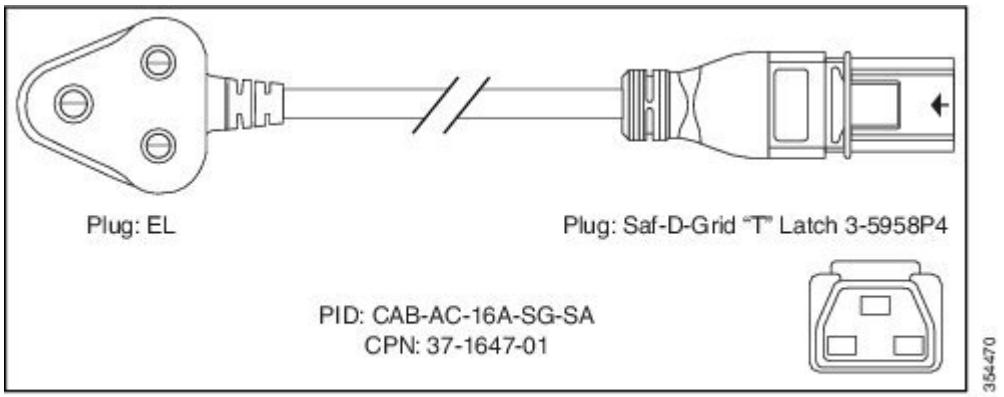


Figure 52: CAB-AC-16A-SG-SW Power Cord

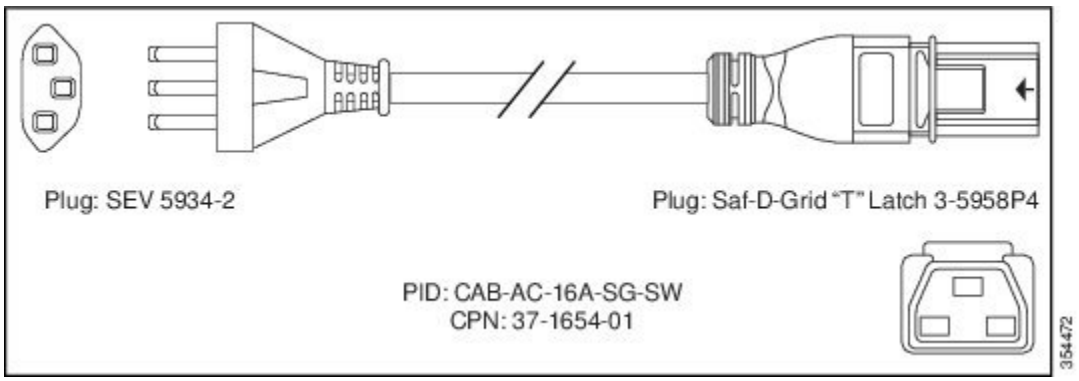


Figure 53: CAB-AC-16A-SG-UK Power Cord

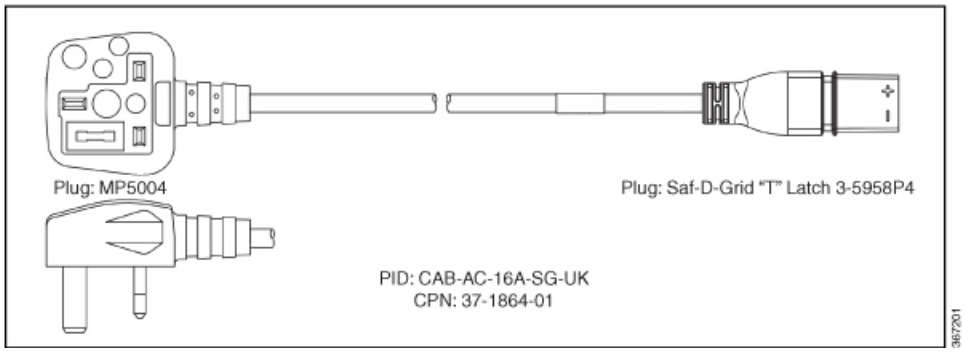


Figure 54: CAB-AC-20A-SG-US Power Cord

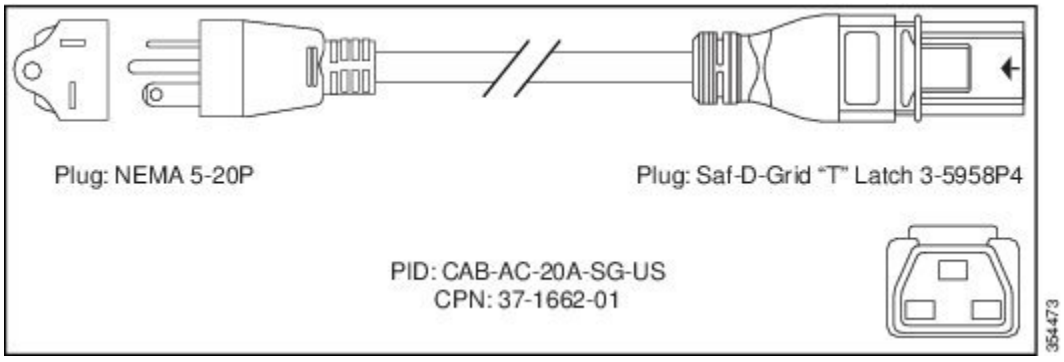


Figure 55: CAB-AC-20A-SG-US1 Power Cord

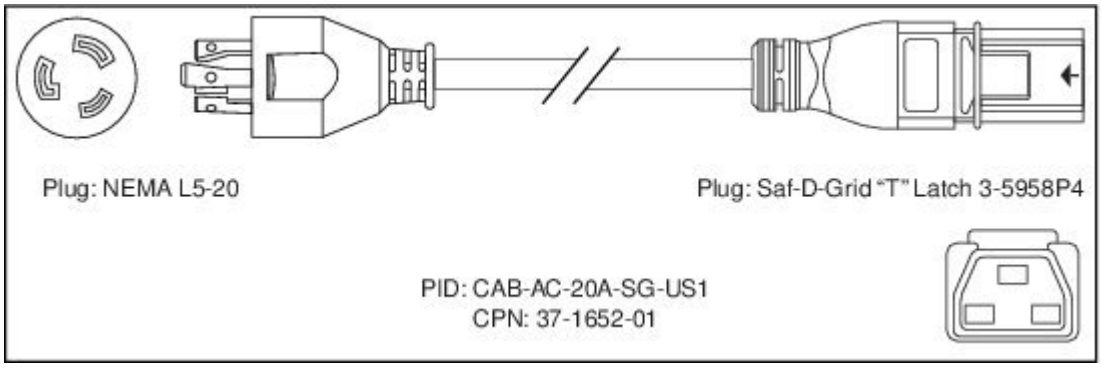


Figure 56: CAB-AC-20A-SG-US2 Power Cord

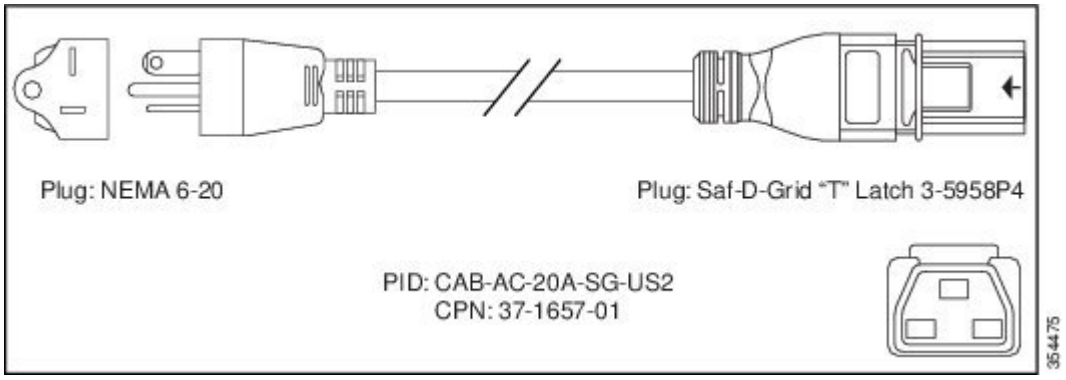


Figure 57: CAB-AC-20A-SG-US3 Power Cord

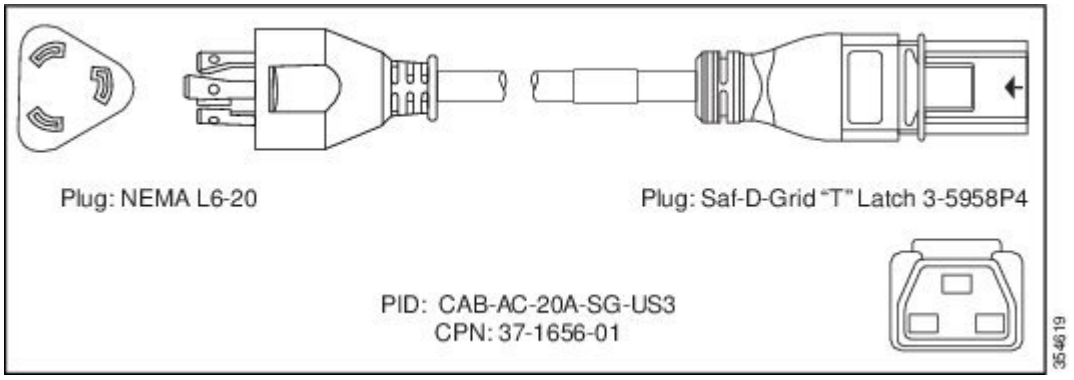


Figure 58: CAB-AC-20A-SG-US4 Power Cord

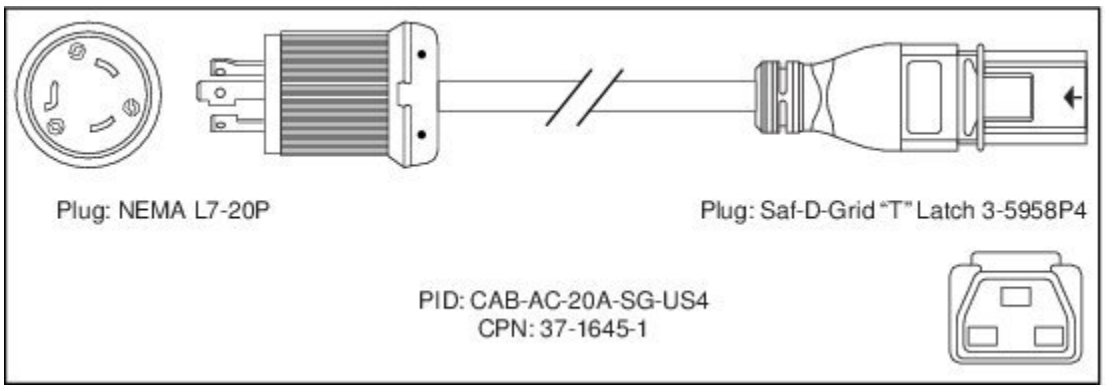


Figure 59: CAB-AC-20A-SG-C20 Power Cord

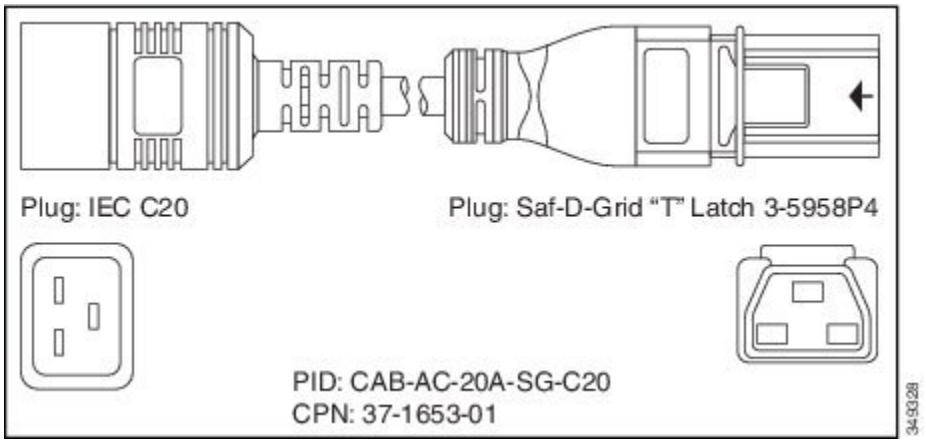


Figure 60: CAB-HV-25A-SG-US2 Power Cord

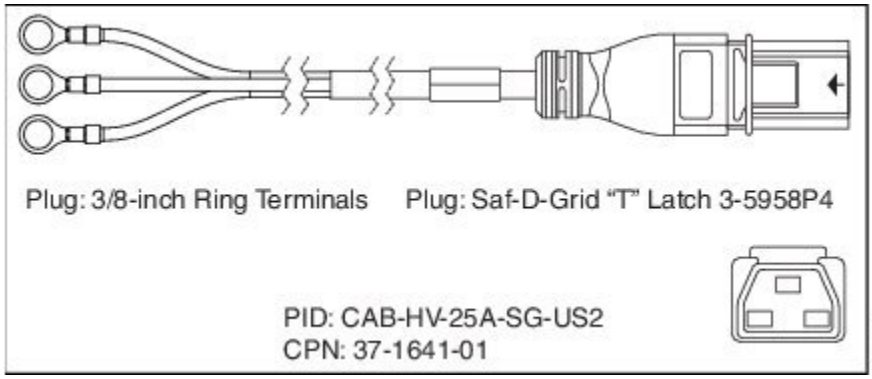


Figure 61: CAB-HV-25A-SG-IN2 Power Cord

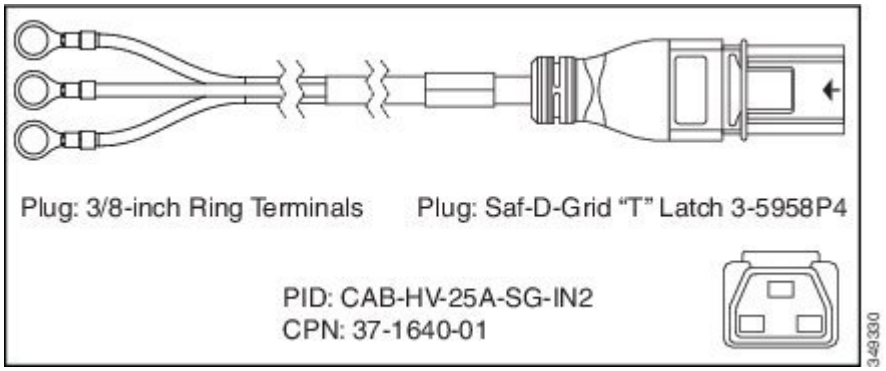


Figure 62: CAB-HV-25A-SG-IN3 Power Cord

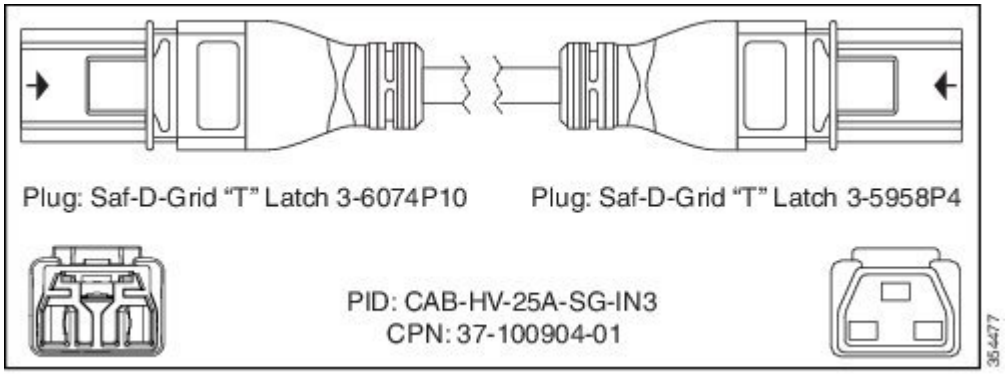


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Figure 63: CAB-7513AC Power Cord

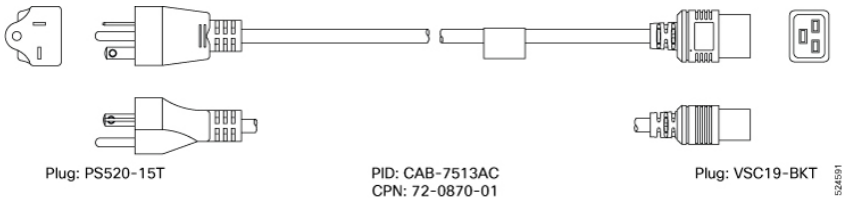

Figure 64: CAB-7513ACI Power Cord

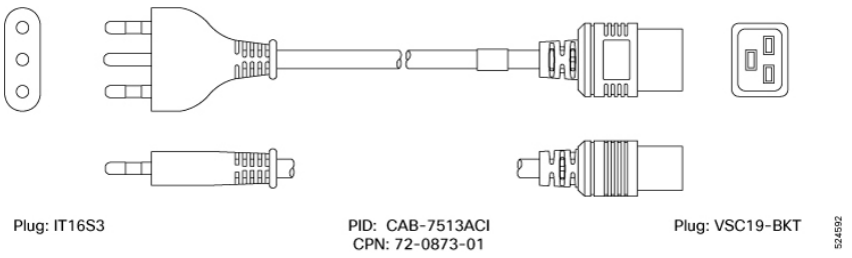

Figure 65: CAB-7513ACA Power Cord

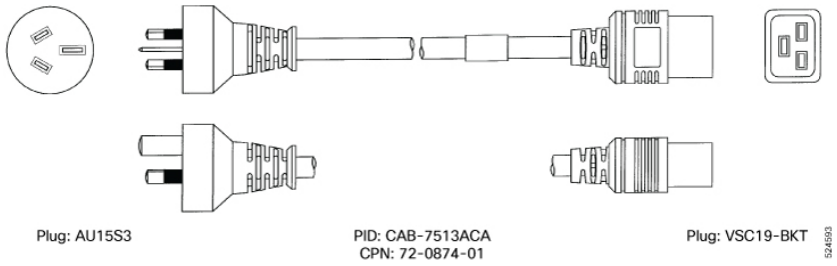

Figure 66: CAB-AC-TWST-C19US Power Cord

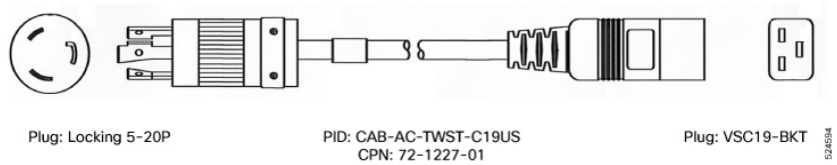

Figure 67: CAB-L620P-C19-US

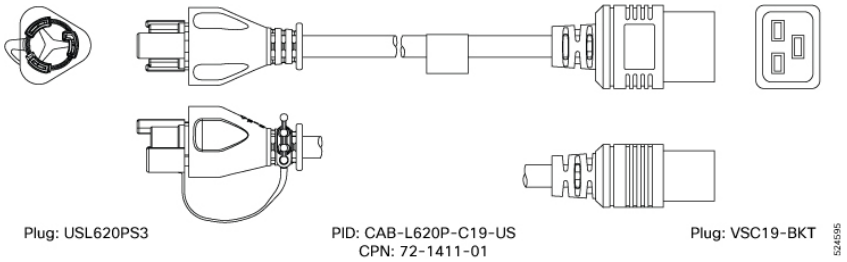

Figure 68: CAB-7513ACR

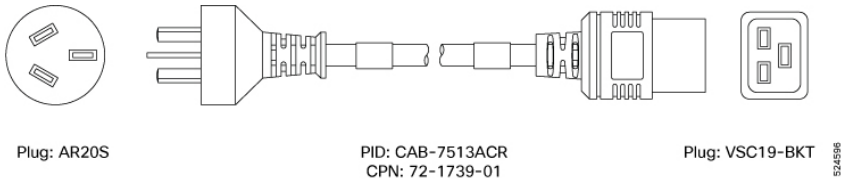

Figure 69: CAB-I309-C19-INT

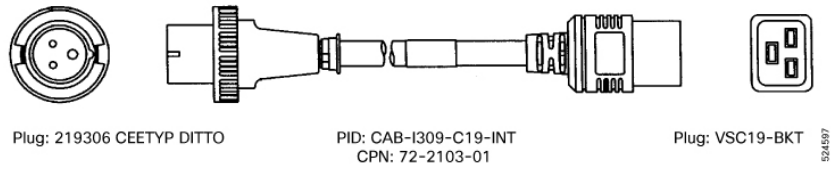

Figure 70: CAB-CEE77-C19-EU

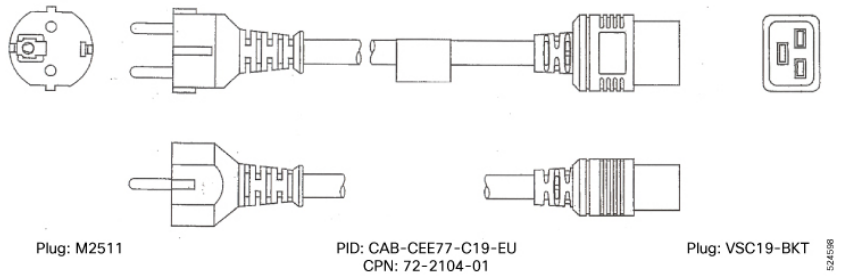

Figure 71: CAB-AC-STRT-C19US

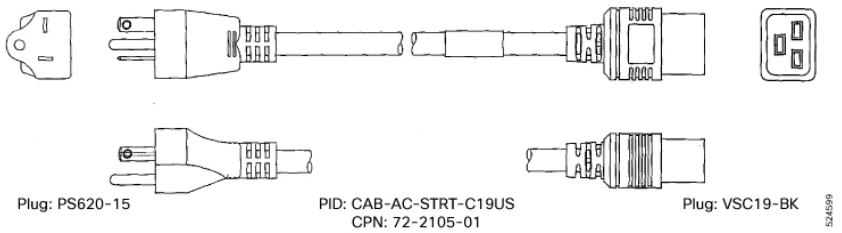

Figure 72: CAB-EL224-C19-BR

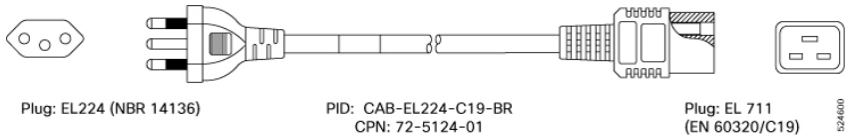

Figure 73: CAB-I309-C19-CH