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Installation Job Aid (English) for Avaya Ethernet Routing Switch 3500 Series (NN47203-303 ver 03.01)

Support

Go to the Avaya Support website at <http://support.avaya.com> for the most up-to-date documentation, product notices, and knowledge articles. You can also search for release notes, downloads, and resolutions to issues. Use the online service request system to create a service request. Chat with live agents to get answers to questions, or request an agent to connect you to a support team if an issue requires additional expertise.

Notices

Notice paragraphs alert you about issues that require your attention.

Following are descriptions of the types of notices used in this document.

 **Note:**

Notes provide tips and useful information regarding the installation and operation of Avaya products.

 **Electrostatic alert:**

ESD notices provide information about how to avoid discharge of static electricity and subsequent damage to Avaya products.

 **Caution:**

Caution notices provide information about how to avoid possible service disruption or damage to Avaya products.

 **Warning:**

Warning notices provide information about how to avoid personal injury when working with Avaya products.

 **Voltage:**

Danger—High Voltage notices provide information about how to avoid a situation or condition that can cause serious personal injury or death from high voltage or electric shock.

 **Danger:**

Danger notices provide information about how to avoid a situation or condition that can cause serious personal injury or death.

Safety messages

Safety messages are an important part of the technical documentation. The messages alert you to hazards to personnel and equipment and provide guidance for the safe operation of your equipment. Failure to comply with the safety messages could result in equipment damage and personal injury.

Following are the most common types of safety messages.

 **Warning:**

Installation must be performed by qualified personnel only. Read and follow all warning notices and instructions marked on the product or included in the documentation.

 **Voltage:**

This equipment relies on the building's installation for overcurrent protection. Ensure that a fuse or circuit breaker no larger than 120 VAC, 15 A U.S. (240 VAC, 16 A International) is used on the phase conductors.

 **Caution:**

This device is a Class A product. In a domestic environment, this device can cause radio interference, in which case the user may be required to take appropriate measures.

 **Caution:**

When mounting this device in a rack, do not stack units directly on top of one another in the rack. Each unit must be secured to the rack with appropriate mounting brackets. Mounting brackets are not designed to support multiple units.

 **Voltage:**

Use only power cords that have a grounding path. Without a proper ground, a person who touches the switch is in danger of receiving an electrical shock. Lack of a grounding path to the switch can result in excessive emissions.

 **Warning:**

Disconnecting the power cord is the only way to turn off power to this device. Always connect the power cord in a location that can be reached quickly and safely in case of an emergency.

 **Warning:**

Fiber optic equipment can emit laser or infrared light that can injure your eyes. Never look into an optical fiber or connector port. Always assume that fiber optic cables are connected to a light source.



Before you begin

Ensure the area where you install and use the switch meets the following environmental requirements:

- Ambient temperature between 32°F and 122°F (0°C and 50°C).
- Relative humidity between 0% and 95% noncondensing.
- No nearby heat sources such as hot air vents or direct sunlight.
- No nearby sources of severe electromagnetic noise.
- No excessive dust.
- Adequate power source within six feet; one circuit required for each power supply.
- At least 2 inches (5.1 cm) (or one vertical rack width) on all sides of the switch unit for ventilation.
- Adequate space at the front and rear of the switch for access to cables.

If you are installing a single Avaya Ethernet Routing Switch on a table or shelf, ensure the surface can support at least 7 to 13 pounds (3 to 6 kilograms).

Installing the switch

The following procedures describe how to install an ERS 3500 series switch on a table or shelf, or in an equipment rack.

* Note:

The installation procedure for ERS 3510GT and ERS 3510GT-PWR+ is different from the other switch models in the series. Refer to *Installing an ERS 3510GT or ERS 3510GT-PWR+ switch* section for installation procedures for the switch models ERS 3510GT or ERS 3510GT-PWR+.

Installing an ERS 3500 series switch in an equipment rack

This procedure describes how to install an ERS 3500 series switch in an equipment rack using the supplied brackets. The brackets secure the chassis and prevent it from sliding around during vibration or when inserting or extracting transceivers.

Required tool: Phillips screwdriver for attaching brackets to the switch

Rack requirements:

- Space of 2.8 inches (7.1 cm) (or one vertical rack width) for each switch in an E1A or 1EC 20 standard 19 inch (48.2 cm) equipment rack and T1A 23 inch (58.5 cm) equipment rack.
- Appropriate rack space to accommodate 1U switch height (44 mm).

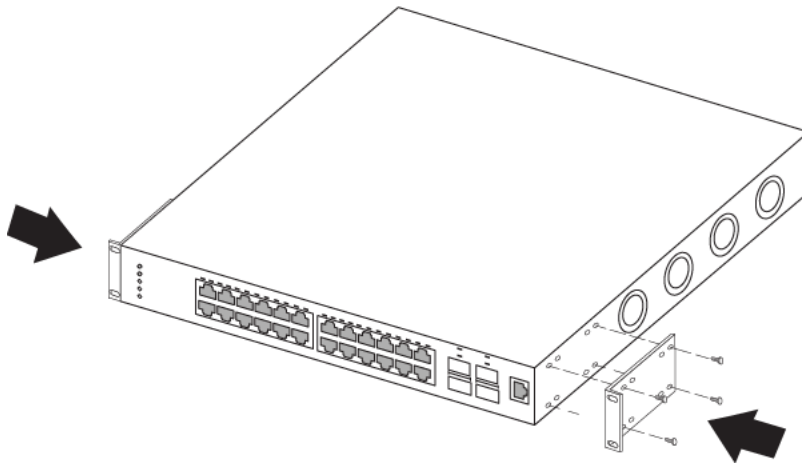
- Rack bolted to floor and braced if necessary.
- Rack must be grounded to the same grounding electrode used by the power service in the area. The ground path must be permanent and must not exceed 1 Ohm of resistance from the rack to the grounding electrode.

Bracket requirements: One Spare Rack Mount Kit — this kit can be used as a replacement rack mount kit for the ERS switch and must be ordered separately (Order Code AL3511001–E6).

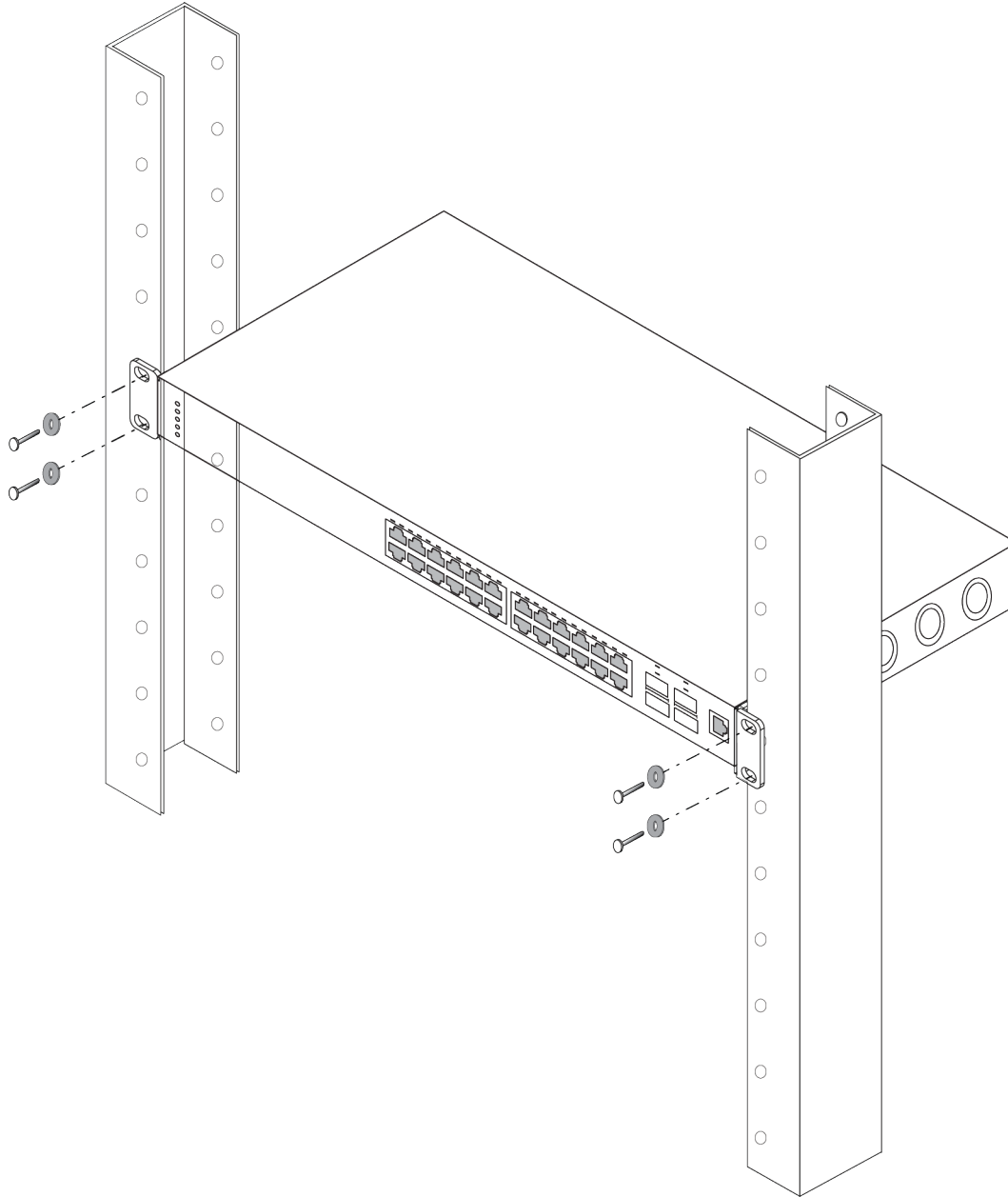
Perform the following procedure to install your switch in an equipment rack.

Procedure

1. Ensure power is disconnected from the switch.
2. Attach a bracket to each side of the switch with the included screws.



3. Slide the switch into the rack. Insert and tighten the rack mount screws.



4. Verify that the switch is securely fastened to the rack.

Installing an ERS 3510GT or ERS 3510GT-PWR+ switch

The following procedures describe how to install the switch models ERS 3510GT or ERS 3510GT-PWR+ on a table or shelf, or in an equipment rack.

Installing an ERS 3510GT or ERS 3510GT-PWR+ switch on a table or shelf

You can install the switch models ERS 3510GT or ERS 3510GT-PWR+ on a flat surface such as a table or shelf. The surface must be able to support the combined weight of the switch and attached

cables. An ERS 3510GT switch weighs 3.85 lb (1.75 kg). An ERS 3510GT-PWR+ switch weighs 5.9 lb (2.70 kg). Cable weight varies for each installation.

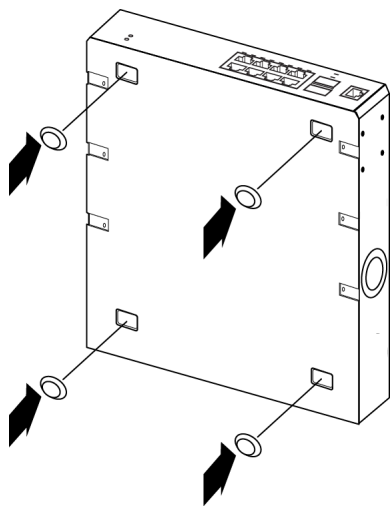
! Important:

Allow at least 2 inches (5.1 cm) on each side of the switch for proper ventilation and at least 5 inches (12.7 cm) at the back of the switch for power cord clearance.

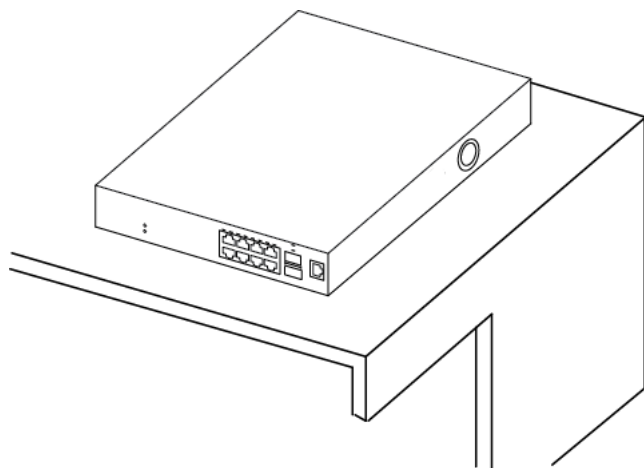
The following procedure provides instructions for installing the switch on a table or shelf.

Procedure

1. Attach the rubber feet at the marked locations.



2. Set the switch on a table or shelf.



Installing a single ERS 3510GT or ERS 3510GT-PWR+ switch in an equipment rack

The following procedure describes how to install the switch models ERS 3510GT or ERS 3510GT-PWR+ using the supplied brackets. The brackets secure the chassis and prevent it from sliding around during vibration or when inserting or extracting transceivers.

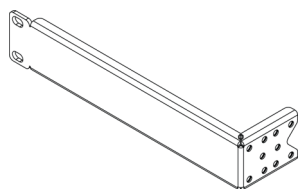
Required Tool: Phillips screwdriver for attaching brackets to the switch

Rack requirements:

- Provide the equivalent of one rack of vertical space for each switch in an E1A or 1EC standard 19 inch (48.2 cm) equipment rack and T1A 23 inch (58.5 cm) equipment rack.
- Appropriate rack space to accommodate 1U switch height (44 mm).
- Rack bolted to floor and braced if necessary.
- Rack must be grounded to the same grounding electrode used by the power service in the area. The group path must be permanent and must not exceed 1 Ohm of resistance from the rack to the grounding electrode.

Bracket requirements:

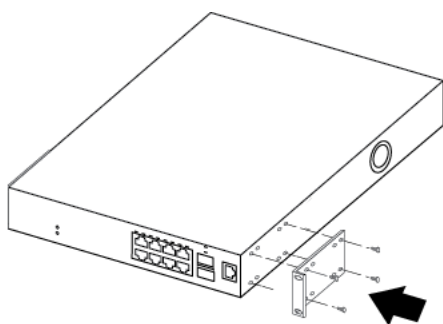
- one 3510–Single Rack Mount Kit — this accessory kit is used to mount a single ERS 3510GT or ERS 3510GT-PWR+ switch in a standard 19 inch rack. The kit contains the necessary bracket (see Figure below) and all required fasteners and must be order separately (Order Code AL3511003–E6).



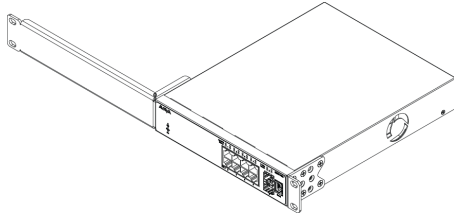
Perform the following procedure to install your switch in a equipment rack.

Procedure

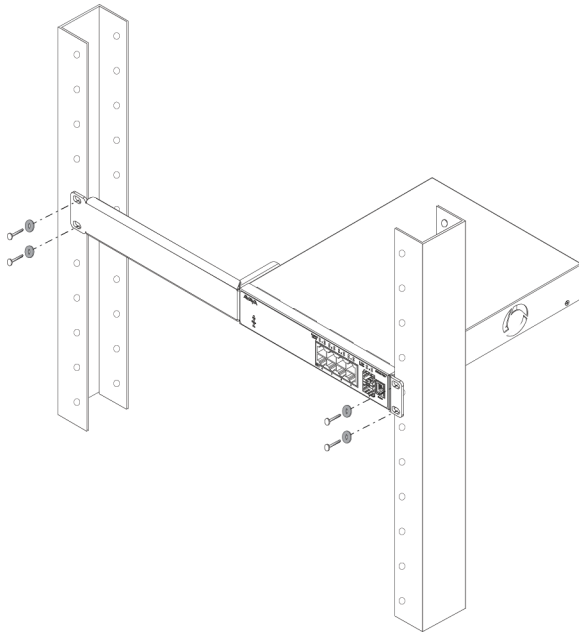
1. Ensure power is disconnected from the switch.
2. With the front of the ERS 3510GT or ERS 3510GT-PWR+ unit facing you, attach the small bracket from the optional kit to the right side of the switch using the flathead screws provided.



3. With the front of the ERS 3510GT or ERS 3510GT-PWR+ unit facing you, attach the long bracket from the optional kit (see Figure that follows) to the left side of the switch using the flathead screws provided.



4. Slide the switch into the rack as shown in the figure that follows. Insert and tighten the rack mount screws.



*** Note:**

The ERS 3500 Series mounting hardware is specific for each switch model. Do not mix screws or brackets between different ERS 3500 Series switches.

5. Verify that the switch is securely fastened to the rack.

Installing two ERS 3510GT or ERS 3510GT-PWR+ switches in an equipment rack

You can install two ERS 3510GT or ERS 3510GT-PWR+ units together to form one standard width rack-wide system using a 19 inch side-by-side Rack Mount Kit (ordered separately).

Required tool: Phillips screwdriver for attaching brackets to the switch

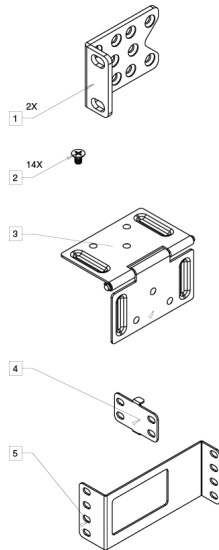
Rack requirements:

- Provide the equivalent of one rack of vertical space for each switch in an E1A or 1EC standard 19 inch (48.2 cm) equipment rack and T1A 23 inch (58.5 cm) equipment rack.
- Appropriate rack space to accommodate 1U switch height (44 mm).
- Rack bolted to floor and braced if necessary.

- Rack must be grounded to the same grounding electrode used by the power service in the area. The group path must be permanent and must not exceed 1 Ohm of resistance from the rack to the grounding electrode.

Bracket requirements:

The following image shows the contents of the Side-by-Side Rack Mount Kit:



1. Rack mount brackets — Quantity: 2
 2. M4 flat head screws — Quantity: 14
 3. Hinged mating bracket — Quantity: 1
 4. Rear bracket for mating identical 3510 switches — Quantity: 1
 5. Rear bracket for mating 3510GT and 3510GT-PWR+ switches — Quantity: 1
- #10–32 rack mounting screws (not shown) — Quantity: 4
- #12–24 rack mounting screws (not shown) — Quantity: 4
- M6 rack mounting screws (not shown) — Quantity: 4

Perform the following procedure to install your switch in an equipment rack.

* Note:

When mounting two 3510GT-PWR+ units side by side in an equipment rack, run the switches in high power mode to ensure adequate airflow. In high power mode, the available power is 170 Watts.

```
#show poe-main-status

PoE Main Status - Stand-alone
-----
Power Mode           : High Power Budget
Available DTE Power  : 170 Watts
DTE Power Status     : Normal
DTE Power Consumption : 0 Watts
```

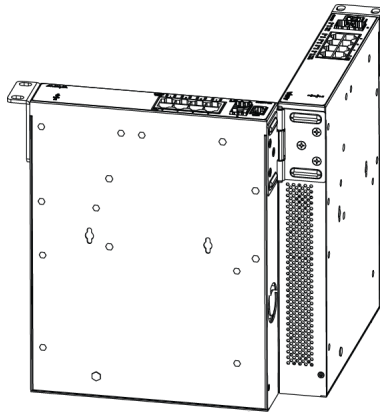
DTE Power Usage Threshold	: 80%
PD Detect Type	: 802.3at and Legacy
Power Source Present	: AC Only
AC Power Status	: Present
DC Power Status	: Not Present

*** Note:**

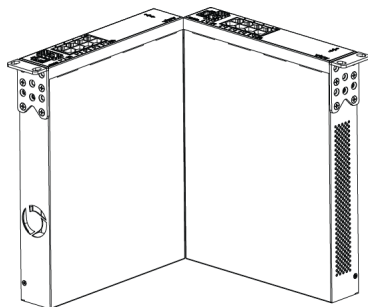
The PoE+ model supports Power over Ethernet+ with compatibility to 802.3at PoE+. 802.3at is backward compatible for detection with 802.3af.

Procedure

1. Ensure power is disconnected from the switch.
2. Connect the two ERS 3510GT switches together by opening the hinged bracket to 90° and attaching it to each ERS 3510GT switch with three M4 flat head screws (included), as shown below.



3. Attach the standard rack mount bracket ears to the outer end of each switch as shown below.

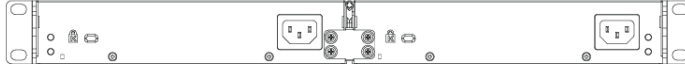


4. Once the switches are joined together, fold the hinged bracket inward.



5. Perform one of the following

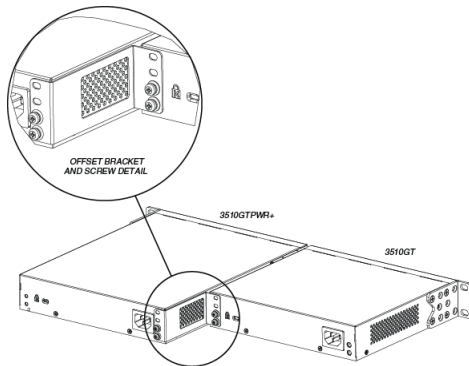
- **To connect two ERS 3510GT or two 3510GT-PWR+ switches together** use the rear bracket as shown below, with four M4 pan head screws to secure the switches at the rear. Once the rear bracket has been installed, the switches can be installed in the rack.



- **To connect one ERS 3510GT switch and one ERS 3510GT-PWR+ switch together** use the offset rear bracket with four M4 pan head screws to join the switches at the rear. Once the rear bracket has been installed, the switches can be installed in the rack.

*** Note:**

If you are mounting a mix of ERS 3510GT and ERS 3510GT-PWR+ units side by side, ensure that the ERS 3510GT unit is mounted on the LEFT side (when viewed from the front) for adequate airflow.



6. Slide the switches into the rack. Insert and tighten the rack mount screws.
7. Verify that the switch is securely fastened to the rack.

AC power specifications

The following table describes the AC power specifications for the Ethernet Routing Switch 3500 Series.

Model	Input current	Input voltage (rms)	Power consumption	Thermal rating
3510GT	Maximum 0.18 A	100–240 VAC at 50–60 Hz	Maximum 18 W	61Btu/h maximum
3510GT-PWR+	Maximum 2.1 A	100–240 VAC at 50–60 Hz	Maximum 210 W	156 Btu/h maximum
3524GT	Maximum 0.28 A	100–240 VAC at 50–60 Hz	Maximum 28.5 W	95 Btu/h maximum
3524GT-PWR+	Maximum 5.0 A	100–240 VAC at 50–60 Hz	Maximum 475 W	357 Btu/h maximum

Table continues...

Model	Input current	Input voltage (rms)	Power consumption	Thermal rating
3526T	Maximum 0.28 A	100–240 VAC at 50–60 Hz	Maximum 28.5 W	95 Btu/h maximum
3526T-PWR+	Maximum 5.0 A	100–240 VAC at 50–60 Hz	Maximum 473 W	350 Btu/h maximum
3549GTS	Maximum 0.71 A	100–240 VAC at 50–60 Hz	Maximum 65 W	223 Btu/h maximum
3549GTS-PWR+	Maximum 4.91 A	100–240 VAC at 50–60 Hz	Maximum 484 W	424 Btu/h maximum
3550T	Maximum 0.83 A	100–240 VAC at 50–60 Hz	Maximum 35 W	118 Btu/h maximum
3550T-PWR+	Maximum 6.8 A	100–240 VAC at 50–60 Hz	Maximum 504 W	456 Btu/h maximum

Connecting AC power

Required cable: AC power cord that meets the requirements of your local electrical code. The following table describes the International power cord specifications.

Table 1: International power cord specifications


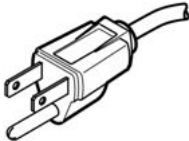
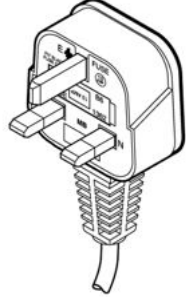
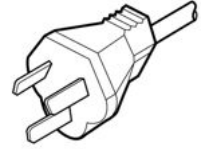
Country and plug description	Specifications	Typical plug
Continental Europe <ul style="list-style-type: none"> • CEE7 standard VII male plug • Harmonized cord (HAR marking on the outside of the cord jacket to comply with the CENELEC Harmonized Document HD-21) 	220 or 230 VAC 50 Hz Single phase	 228FA
U.S./Canada/Japan <ul style="list-style-type: none"> • NEMA5-15P male plug • UL-recognized (UL stamped on cord jacket) • CSA-certified (CSA label secured to the cord) 	100 or 120 VAC 50-60 Hz Single phase	 227FA

Table continues...

Country and plug description	Specifications	Typical plug
United Kingdom • BS1363 male plug with fuse • Harmonized cord	240 VAC 50 Hz Single phase	 229FA
Australia AS3112-1981 male plug	240 VAC 50 Hz Single phase	 230FA

The Ethernet Routing Switch 3500 series does not have a power switch. When you connect the AC power cord to a suitable AC power outlet, the switch powers up immediately.

Connect the AC power cord to the back of the switch, and then connect the cord to a power outlet.

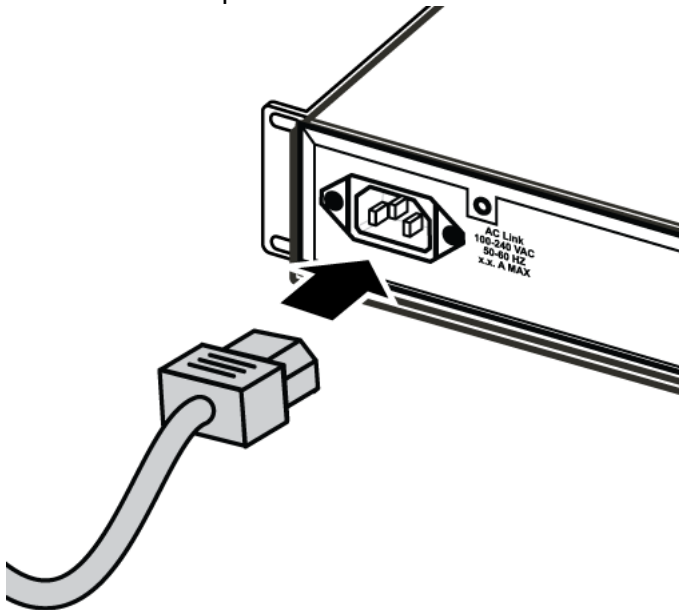


Figure 1: Connecting the AC power cord to the Ethernet Routing Switch 3500 Series

Connect the AC power cord to the back of the switch, and then connect the cord to a power outlet.