Abstract

This document guides you through installation of HP A Series products, including installing the device, connecting to the network, hardware management, and troubleshooting.
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FE SFP transceiver modules

10-GE SFP+ transceiver modules

SFP+ cables

10-GE XFP transceiver modules

CX4 cables

Appendix C Ports and LEDs

Ports

Console port

10/100/1000Base-T Ethernet port

SFP port

Combo interface

LEDs

System status LED

Power supply status LEDs

RPS status LED

Port mode LED

Seven-segment LED

10/100/1000Base-T Ethernet port LED

SFP port status LED

Interface card status LED

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Preparing for installation

The HP A5500 EI & A5500 SI Switch Series includes the models in Table 1.

**Table 1 Models in the HP A5500 EI & A5500 SI Switch Series**

<table>
<thead>
<tr>
<th>Type</th>
<th>Product code</th>
<th>HP description</th>
<th>Alias</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-PoE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>JD377A</td>
<td>HP A5500-24G EI Switch with 2 Interface Slots</td>
<td>A5500-24G EI (2 slots)</td>
</tr>
<tr>
<td></td>
<td>JG250A</td>
<td>HP A5500-24G EI TAA Switch with 2 Interface Slots</td>
<td>A5500-24G EI TAA (2 slots)</td>
</tr>
<tr>
<td></td>
<td>JD375A</td>
<td>HP A5500-48G EI Switch with 2 Interface Slots</td>
<td>A5500-48G EI (2 slots)</td>
</tr>
<tr>
<td></td>
<td>JG251A</td>
<td>HP A5500-48G EI TAA Switch with 2 Interface Slots</td>
<td>A5500-48G EI TAA (2 slots)</td>
</tr>
<tr>
<td></td>
<td>JD374A</td>
<td>HP A5500-24G-SFP EI Switch with 2 Interface Slots</td>
<td>A5500-24G-SFP EI (2 slots)</td>
</tr>
<tr>
<td></td>
<td>JG249A</td>
<td>HP A5500-24G-SFP EI TAA Switch with 2 Interface Slots</td>
<td>A5500-24G-SFP EI TAA (2 slots)</td>
</tr>
<tr>
<td></td>
<td>JD369A</td>
<td>HP A5500-24G SI Switch with 2 Interface Slots</td>
<td>A5500-24G SI (2 slots)</td>
</tr>
<tr>
<td></td>
<td>JD370A</td>
<td>HP A5500-48G SI Switch with 2 Interface Slots</td>
<td>A5500-48G SI (2 slots)</td>
</tr>
<tr>
<td><strong>PoE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>JG241A</td>
<td>HP A5500-24G-PoE+ EI Switch with 2 Interface Slots</td>
<td>A5500-24G-PoE+ EI (2 slots)</td>
</tr>
<tr>
<td></td>
<td>JG252A</td>
<td>HP A5500-24G-PoE+ EI TAA Switch with 2 Interface Slots</td>
<td>A5500-24G-PoE+ EI TAA (2 slots)</td>
</tr>
<tr>
<td></td>
<td>JG240A</td>
<td>HP A5500-48G-PoE+ EI Switch with 2 Interface Slots</td>
<td>A5500-48G-PoE+ EI (2 slots)</td>
</tr>
<tr>
<td></td>
<td>JG253A</td>
<td>HP A5500-48G-PoE+ EI TAA Switch with 2 Interface Slots</td>
<td>A5500-48G-PoE+ EI TAA (2 slots)</td>
</tr>
<tr>
<td></td>
<td>JG238A</td>
<td>HP A5500-24G-PoE+ SI Switch with 2 Interface Slots</td>
<td>A5500-24G-PoE+ SI (2 slots)</td>
</tr>
<tr>
<td></td>
<td>JG239A</td>
<td>HP A5500-48G-PoE+ SI Switch with 2 Interface Slots</td>
<td>A5500-48G-PoE+ SI (2 slots)</td>
</tr>
</tbody>
</table>
Safety recommendations

⚠️ WARNING!
Before installation and operation, read all of the safety instructions in the Compliance and Safety Guide supplied with your device.

This section provides general recommendations. For more information, see the Compliance and Safety Guide.

- Turn off all power and remove all power cables before opening the chassis.
- Unplug all power and external cables before moving the chassis.
- Locate the emergency power-off switch before installation and shut off power immediately if necessary.
- Always wear an ESD-preventive wrist strap when installing the device.
- Do not stare into the open optical interface. The high-power density light can burn the retina.
- Use a good grounding system to protect your router against lightning shocks, interference, and ESD. This is essential to the operating reliability of your switch.
- Make sure that the resistance between the chassis and the ground is less than 1 ohm.

Installation site requirements

The following tables provide information about temperature and humidity, cleanliness, and air quality requirements.

To ensure normal operation of the router, make sure that the room temperature meets the requirements described in Table 2.

Table 2 Temperature requirements

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating temperature</td>
<td>Long term: 0°C to 45°C (32°F to 113°F)</td>
</tr>
<tr>
<td></td>
<td>Short term: -10°C to +55°C (14°F to 131°F) (no more than 96 hours of continuous operation in less than 15 days in one year)</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-40°C to +70°C (−40°F to +158°F)</td>
</tr>
</tbody>
</table>

⚠️ CAUTION:
If condensation appears on the router when you move it to a high-temperature environment, dry the router before powering it on to avoid short circuits.
Maintain appropriate humidity in your equipment room, as described in Table 3.

**Table 3 Humidity requirements**

<table>
<thead>
<tr>
<th>Humidity</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating humidity (noncondensing)</td>
<td>5% to 95%</td>
</tr>
<tr>
<td>Storage humidity (noncondensing)</td>
<td>5% to 95%</td>
</tr>
</tbody>
</table>

Lasting high relative humidity tends to cause poor insulation, increased electricity consumption, mechanical property change of materials, and corrosion of metal parts. Lasting low relative humidity is likely to result in loose screws due to washer contraction, and even ESD, which causes the circuits to fail.

**Table 4 Dust concentration limit in the equipment room**

<table>
<thead>
<tr>
<th>Physical active substance</th>
<th>Concentration limit (particles/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust particle</td>
<td>≤ 3 x 10⁴ (No visible dust on desk over three days)</td>
</tr>
</tbody>
</table>

Note: Dust particle diameter ≥ 5μm

**Table 5 Limits on harmful gases in the equipment room**

<table>
<thead>
<tr>
<th>Gas</th>
<th>Max concentration (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO₂</td>
<td>0.2</td>
</tr>
<tr>
<td>H₂S</td>
<td>0.06</td>
</tr>
<tr>
<td>NH₃</td>
<td>0.05</td>
</tr>
<tr>
<td>Cl₂</td>
<td>0.01</td>
</tr>
</tbody>
</table>

**Rack-mounting requirements**

Before rack-mounting a switch, make sure the rack meets the following requirements:

- HP recommends that the switch is mounted in an open rack. If you mount a switch in a closed rack, make sure there is a good heat dissipation system.
- The rack is steady enough to support the switch and accessories.
- The switch fits the rack size. Leave some space beside the left and right panels of the switch for chassis heat dissipation.

**Installation tools**

- Flathead screwdriver
- Phillips screwdriver
- Needle-nose pliers
- Wire-stripping pliers
- Diagonal pliers
- ESD-preventive wrist strap
- Blow dryer

All these installation tools are user supplied.
Installing the switch

⚠️ **CAUTION:**
Keep the tamper-proof seal on a mounting screw on the chassis cover intact, and if you want to open the chassis, contact HP for permission. Otherwise, HP will not be liable for any consequence caused thereby.
Figure 1 Hardware installation flow

Install the switch to a 19-in rack or workbench

- Ground the switch
- Install hot swappable power supplies?
  - Yes: Install hot swappable power supplies
  - No: Connect the power cords

Connect the power cords

Verify the installation

Power on the switch

Operating properly?
  - Yes: Troubleshoot the switch
  - No: Install interface cards?
    - Yes: Install interface cards
    - No: Install transceiver modules, connectors, and cables

End
Installing the switch in a 19-inch rack

You can install the switch in a 19-inch standard rack by using different mounting positions. Table 6 shows the installation methods available for the switches of different depths.

**Table 6 Installation methods**

<table>
<thead>
<tr>
<th>Chassis</th>
<th>Depth</th>
<th>Use front mounting brackets only</th>
<th>Use front mounting brackets and a rack shelf</th>
<th>Use front and rear mounting brackets</th>
</tr>
</thead>
<tbody>
<tr>
<td>A5500-24G EI (2 slots)</td>
<td></td>
<td>Yes (see “Rack-mounting by using only front mounting brackets”)</td>
<td>Yes (see “Rack-mounting by using front and rear mounting brackets”)</td>
<td></td>
</tr>
<tr>
<td>A5500-24G EI TAA (2 slots)</td>
<td>300 mm (11.81 in)</td>
<td>Yes (see “Rack-mounting by using only front mounting brackets”)</td>
<td>Yes (see “Rack-mounting by using front and rear mounting brackets”)</td>
<td></td>
</tr>
<tr>
<td>A5500-24G SI (2 slots)</td>
<td></td>
<td>Yes (see “Rack-mounting by using front and rear mounting brackets”)</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>A5500-48G EI (2 slots)</td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>A5500-48G EI TAA (2 slots)</td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>A5500-48G SI (2 slots)</td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>A5500-24G-SFP EI (2 slots)</td>
<td>360 mm (14.17 in)</td>
<td>No</td>
<td>Yes (see “Rack-mounting by using front and rear mounting brackets”)</td>
<td></td>
</tr>
<tr>
<td>A5500-24G-SFP EI TAA (2 slots)</td>
<td></td>
<td></td>
<td>No (see “Rack-mounting by using front and rear mounting brackets”)</td>
<td></td>
</tr>
<tr>
<td>A5500-24G-PoE+ EI (2 slots)</td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>A5500-24G-PoE+ EI TAA (2 slots)</td>
<td></td>
<td></td>
<td>Yes (see “Rack-mounting by using front and rear mounting brackets”)</td>
<td></td>
</tr>
<tr>
<td>A5500-48G-PoE+ EI (2 slots)</td>
<td>420 mm (16.54 in)</td>
<td>No</td>
<td>Yes (see “Rack-mounting by using front and rear mounting brackets”)</td>
<td></td>
</tr>
<tr>
<td>A5500-48G-PoE+ EI TAA (2 slots)</td>
<td></td>
<td></td>
<td>No (see “Rack-mounting by using front and rear mounting brackets”)</td>
<td></td>
</tr>
<tr>
<td>A5500-48G-PoE+ SI (2 slots)</td>
<td></td>
<td></td>
<td>Yes (see “Rack-mounting by using front and rear mounting brackets”)</td>
<td></td>
</tr>
<tr>
<td>A5500-48G-PoE+ SI TAA (2 slots)</td>
<td></td>
<td></td>
<td>No (see “Rack-mounting by using front and rear mounting brackets”)</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:**

For a switch with a depth greater than 300 mm (11.81 in), the front mounting brackets are not weight-bearing.
Mounting brackets

Figure 2 Front mounting bracket

1. Hole for attaching to a rack (by using an M6 screw)
2. Hole for attaching to the switch chassis

Figure 3 Rear mounting bracket

1. Hole for attaching to a rack (by using an M6 screw)

NOTE:
The M6 screws for fixing the brackets to a rack are user supplied.

Table 7 shows the mounting bracket shipment for different switch models.
Table 7 Mounting bracket kit shipped with the A5500 EI and A5500 SI switches

<table>
<thead>
<tr>
<th>Chassis</th>
<th>Front mounting brackets</th>
<th>Rear mounting brackets</th>
</tr>
</thead>
<tbody>
<tr>
<td>A5500-24G EI (2 slots)</td>
<td>One pair</td>
<td>N/A</td>
</tr>
<tr>
<td>A5500-24G EI TAA (2 slots)</td>
<td>One pair</td>
<td>One pair</td>
</tr>
<tr>
<td>A5500-48G EI (2 slots)</td>
<td>One pair</td>
<td>One pair</td>
</tr>
<tr>
<td>A5500-48G EI TAA (2 slots)</td>
<td>One pair</td>
<td>One pair</td>
</tr>
<tr>
<td>A5500-24G SI (2 slots)</td>
<td>One pair</td>
<td>One pair</td>
</tr>
<tr>
<td>A5500-48G SI (2 slots)</td>
<td>One pair</td>
<td>One pair</td>
</tr>
<tr>
<td>A5500-24G-SFP EI (2 slots)</td>
<td>One pair</td>
<td>One pair</td>
</tr>
<tr>
<td>A5500-24G-SFP EI TAA (2 slots)</td>
<td>One pair</td>
<td>One pair</td>
</tr>
<tr>
<td>A5500-24G-PoE+ EI (2 slots)</td>
<td>One pair</td>
<td>One pair</td>
</tr>
<tr>
<td>A5500-24G-PoE+ EI TAA (2 slots)</td>
<td>One pair</td>
<td>One pair</td>
</tr>
<tr>
<td>A5500-48G-PoE+ EI (2 slots)</td>
<td>One pair</td>
<td>One pair</td>
</tr>
<tr>
<td>A5500-48G-PoE+ EI TAA (2 slots)</td>
<td>One pair</td>
<td>One pair</td>
</tr>
<tr>
<td>A5500-24G-PoE+ SI (2 slots)</td>
<td>One pair</td>
<td>One pair</td>
</tr>
<tr>
<td>A5500-48G-PoE+ SI (2 slots)</td>
<td>One pair</td>
<td>One pair</td>
</tr>
</tbody>
</table>

Rack-mounting by using only front mounting brackets

This installation method is available only for the A5500-24G EI (2 slots), A5500-24G EI TAA (2 slots), A5500-48G EI (2 slots), A5500-48G EI TAA (2 slots), A5500-24G SI (2 slots), and A5500-48G SI (2 slots) switches.

This task requires two people.

To mount a switch in a 19-inch standard rack by using only the front mounting brackets:

1. Wear an ESD-preventive wrist strap and make sure it makes good skin contact and is properly grounded.
2. Check that the rack is properly grounded and can support the weight of the switch chassis and all its accessories.
3. Unpack the front mounting brackets and the screws for fixing the brackets to the switch chassis.
4. Align the round holes in one bracket with the holes in the front mounting position of the switch chassis, and use the screws to fix the mounting bracket to the chassis, as shown in Figure 4.
5. Repeat the previous step to attach the other mounting bracket to the chassis.
6. Install cage nuts (user-supplied) in the mounting holes in the rack posts.

7. One person holds the switch chassis and aligns the oval holes in the brackets with the mounting holes in the rack posts, and the other person fixes the mounting brackets with M6 screws (user-supplied) to the rack, as shown in Figure 5.

Figure 4 Attaching the front mounting brackets to the chassis

Figure 5 Attaching the front mounting brackets to the rack
Rack-mounting by using front mounting brackets and a rack shelf

This installation method is available for all A5500 EI and A5500 SI switches.

To mount a switch in a 19-inch rack by using the front mounting brackets and a rack shelf:

1. Wear an ESD-preventive wrist strap and make sure it makes good skin contact and is properly grounded.
2. Check that the rack is properly grounded and can support the weight of the switch chassis and all its accessories.
3. Fix the rack shelf horizontally in a proper position in the rack.
4. Unpack the front mounting brackets and the screws for fixing the brackets to the switch chassis.
5. Align the round holes in one bracket with the holes in the front mounting position of the switch chassis, and use the removed screws to fix the mounting bracket to the chassis, as shown in Figure 4.
6. Repeat the previous step to attach the other mounting bracket to the chassis.
7. Install cage nuts (user-supplied) in the mounting holes in the rack posts.
8. Place the switch on the rack shelf, push it into the rack until the brackets touch the rack posts, and fix the mounting brackets with M6 screws (user-supplied) to the rack, as shown in Figure 5.

Rack-mounting by using front and rear mounting brackets

This installation method is available only for the A5500-24G-PoE+ EI (2 slots), A5500-24G-PoE+ EI TAA (2 slots), A5500-48G-PoE+ EI (2 slots), A5500-48G-PoE+ EI TAA (2 slots), A5500-24G-PoE+ SI (2 slots), A5500-24G-SFP EI (2 slots), A5500-24G-SFP EI TAA (2 slots) switches.

This task requires two people.

To install the switch in a 19-inch rack by using the front and rear mounting brackets:

1. Wear an ESD-preventive wrist strap and make sure it makes good skin contact and is properly grounded.
2. Unpack the front mounting brackets and the screws for fixing the brackets to the switch chassis.
3. Align the round holes in one front mounting bracket with the holes in the front mounting position of the switch chassis, and use the removed screws to fix the mounting bracket to the chassis, as shown in Figure 4.
4. Repeat the previous step to attach the other front mounting bracket to the chassis.
5. Unpack the rear mounting brackets and the load-bearing screws.
6. Fix the load-bearing screws in one of the rear mounting positions (see callout 2 in Figure 6) as needed.

The A5500-24G-SFP EI (2 slots) and A5500-24G-SFP EI TAA (2 slots) switches have only two of the rear mounting positions.

**Figure 6 Attaching the front mounting brackets and load-bearing screws to the switch chassis**

<table>
<thead>
<tr>
<th>(1) Load-bearing screw</th>
<th>(2) Rear mounting positions</th>
</tr>
</thead>
<tbody>
<tr>
<td>(3) Front panel</td>
<td>(4) Front mounting bracket</td>
</tr>
<tr>
<td>(5) Screw for fixing</td>
<td></td>
</tr>
<tr>
<td>the front mounting</td>
<td></td>
</tr>
<tr>
<td>brackets to the switch</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:**
The rear mounting brackets must closely contact with the load-bearing screws to support the chassis weight.

7. Install cage nuts (user-supplied) in the mounting holes in the front and rear rack posts.
8. Fix the rear mounting brackets to the rear posts with M6 screws (user supplied), as shown in Figure 7.

**Figure 7 Attaching the rear mounting brackets to a rack**

(1) Rear square-holed post  
(2) Rear mounting bracket
9. One person supports the chassis bottom with one hand, holds the front part of the chassis with the other hand, and pushes the chassis into the rack gently. Make sure that the load-bearing screws closely contact with the upper edges of the rear mounting brackets, as shown in Figure 8.

**Figure 8 Mounting the switch in the rack**
10. The other person aligns the oval holes in the front brackets with the mounting holes in the front rack posts, and fixes the front mounting brackets with M6 screws (user supplied) to the front rack posts, as shown in Figure 9.

Make sure that front and rear mounting brackets have securely fixed the switch in the rack.

**Figure 9 Attaching the front brackets to the rack**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Load-bearing screw</td>
</tr>
<tr>
<td>2</td>
<td>Rear mounting bracket</td>
</tr>
<tr>
<td>3</td>
<td>Front panel</td>
</tr>
<tr>
<td>4</td>
<td>Screw used to fix front mounting brackets to front brackets</td>
</tr>
<tr>
<td>5</td>
<td>Front mounting bracket</td>
</tr>
<tr>
<td>6</td>
<td>Front square-holed post</td>
</tr>
</tbody>
</table>
Mounting the switch on a workbench

**IMPORTANT:**
- Ensure good ventilation and 10 cm (3.9 in) of clearance around the chassis for heat dissipation.

To mount the switch on a workbench:
1. Check that the workbench is sturdy and properly grounded.
2. Place the switch bottom up, and clean the round holes in the chassis bottom with a dry cloth.
3. Attach the rubber feet to the four round holes in the bottom of the chassis.
4. Place the switch upside up on the workbench. Avoid placing heavy objects on the switch.

Grounding the switch

**WARNING!**
Correctly connecting the switch grounding cable is crucial to lightning protection and EMI protection.

The power and grounding terminals in this section are for illustration only.

The power input end of the switch has a noise filter, whose central ground is directly connected to the chassis to form the chassis ground (commonly known as PGND). You must securely connect this chassis ground to the earth so the faradism and leakage electricity can be safely released to the earth to minimize EMI susceptibility of the switch.

You can ground the switch in one of the following ways, depending on the grounding conditions available at the installation site:
- Grounding the switch with a grounding strip
- Grounding the switch with a grounding conductor buried in the earth ground
- Grounding the switch by using the AC power cord

Grounding the switch with a grounding strip

**WARNING!**
Connect the grounding cable to the grounding system in the equipment room. Do not connect it to a fire main or lightning rod.

If a grounding strip is available at the installation site, connect the grounding cable to the grounding strip.

To connect the grounding cable, for example, to an A5500-48G EI (2 slots) switch:
1. Identify the grounding point (with a grounding sign) on the rear panel of the switch chassis, and remove the grounding screw from the grounding point.
2. Attach the grounding screw to the OT terminal of the grounding cable.
3. Use a screwdriver to fasten the grounding screw into the grounding screw hole.
Figure 10 shows the grounding terminal position of all A5500 EI and A5500 SI switches but the A5500-24G-SFP EI (2 slots) and A5500-24G-SFP EI TAA (2 slots).

Figure 11 shows the grounding terminal position of the A5500-24G-SFP EI (2 slots) and A5500-24G-SFP EI TAA (2 slots) switches.

**Figure 10 Connecting the grounding cable to the chassis (I)**

![Diagram](image1)

- (1) Grounding sign
- (2) Grounding hole
- (3) OT terminal
- (4) Grounding cable
- (5) Grounding screw

**CAUTION:**
For the A5500-24G-SFP EI (2 slots) and A5500-24G-SFP EI TAA (2 slots) switches, follow the direction shown in Figure 11 to connect the grounding cable to avoid affecting the installation and removal of the power supply.

**Figure 11 Connecting the grounding cable to the chassis (II)**

![Diagram](image2)

- (1) Grounding cable
- (2) Grounding sign
- (3) Grounding hole
- (4) OT terminal
- (5) Grounding screw

4. Remove the hex nut of a grounding post on the grounding strip.
5. Cut the grounding cable as appropriate for connecting to the grounding strip.
6. Peel 5 mm (0.20 in) of insulation sheath by using a wire stripper, and insert the bare metal part through the black insulation covering into the end of the OT terminal.
7. Secure the metal part of the cable to the OT terminal with a crimper, cover the joint with the insulation covering, and heat the insulation covering with a blow dryer to completely cover the metal part.
8. Attach the OT terminal or the ring to the grounding strip through the grounding post, and fasten it with the removed hex nut, as shown in Figure 13.

Figure 12 Making a grounding cable connector

Figure 13 Connecting the grounding cable to a grounding strip

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

(1) Grounding post (2) Grounding strip
(3) Grounding cable (4) Hex nut

Grounding the switch with a grounding conductor buried in the earth ground

If the installation site has no grounding strips, but earth ground is available, hammer a 0.5 m (1.64 ft) or longer angle iron or steel tube into the earth ground to serve as a grounding conductor.

The dimensions of the angle iron must be at least 50 × 50 × 5 mm (1.97 × 1.97 × 0.20 in). The steel tube must be zinc-coated and its wall thickness must be at least 3.5 mm (0.14 in).

Weld the yellow-green grounding cable to the angle iron or steel tube and treat the joint for corrosion protection.
Grounding the switch by burying the grounding conductor into the earth ground

If the installation site has no grounding strips or earth ground, you ground an AC-powered switch through the PE wire of the power cord. Make sure the following requirements are met:

- The power cord has a PE terminal.
- The ground contact in the power outlet is securely connected to the ground in the power distribution room or on the AC transformer side.
- The power cord is securely connected to the power outlet.

**NOTE:**
If the ground contact in the power outlet is not connected to the ground, report the problem and reconstruct the grounding system.

Grounding the switch by using the AC power cord

If the installation site has no grounding strips or earth ground, you ground an AC-powered switch through the PE wire of the power cord. Make sure the following requirements are met:

- The power cord has a PE terminal.
- The ground contact in the power outlet is securely connected to the ground in the power distribution room or on the AC transformer side.
- The power cord is securely connected to the power outlet.

**NOTE:**
If the ground contact in the power outlet is not connected to the ground, report the problem and reconstruct the grounding system.
NOTE:
To guarantee the grounding effect, use the grounding cable provided with the switch to connect to the grounding strip in the equipment room as long as possible.

Installing/removing a power supply

This section applies only to the A5500-24G-SFP EI (2 slots) and A5500-24G-SFP EI TAA (2 slots) switches.

This section uses a PSR150-A power supply as an example to describe the installation and removal of power supplies.

Installing a power supply

🚨 CAUTION:
- To prevent damage to the power supply or the connector on the backplane of the powered device, insert the power supply gently. If you encounter a hard resistance while inserting the power supply, pull out the power supply and then insert it again.

To install a power supply:

1. Wear an ESD-preventive wrist strap and make sure it makes good skin contact and is properly grounded.
2. If the power supply slot is covered by a filler panel, remove the filler panel first.
   Put away the filler panel for future use.
3. Unpack the power supply and check that the power supply model is correct.
4. Correctly orient the power supply with the power supply slot, grasp the handle of the power supply with one hand and support its bottom with the other, and slide the power supply slowly along the guide rails into the slot (see callout 1 in Figure 16).
   The slot is foolproof. If you cannot insert the power supply into the slot, re-orient the power supply rather than use excessive force to push it in.
5. Fasten the captive screws on the power supply with a Philips screwdriver to secure the power supply in the chassis (see callout 2 in Figure 16). If the captive screw cannot be tightly fixed, check the installation of the power supply.

**Figure 16 Installing a power supply**

![Figure 16 Installing a power supply](image)

**NOTE:**
If you install only one power supply, install the filler panel over the empty power supply slot for good ventilation.

**Removing a power supply**

To remove a power supply:

1. Wear an ESD-preventive wrist strap and make sure it makes good skin contact and is properly grounded.
2. Disconnect the power cord from the power supply and the power outlet.
3. Loosen the captive screws of the power supply with a Philips screwdriver until they are completely disengaged.
4. Grasp the handle of the power supply with one hand and pull it out a little, support the bottom with the other hand, and pull the power supply slowly along the guide rails out of the slot.

**NOTE:**
Put away the removed power supply in an antistatic bag for future use.
Connecting the power cord

WARNING!
Make sure that the grounding cable has been properly connected before powering on the switch.

Use Table 8 to identify the power cord connection procedures available for your switch.

Table 8 Power cord connection methods at a glance

<table>
<thead>
<tr>
<th>Chassis</th>
<th>Connection procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>A5500-24G EI (2 slots)</td>
<td>Fixed AC-input: Connecting the AC power cord</td>
</tr>
<tr>
<td>A5500-24G EI TAA (2 slots)</td>
<td>RPS input: Connect the switch to a +12 VDC output RPS</td>
</tr>
<tr>
<td>A5500-48G EI (2 slots)</td>
<td></td>
</tr>
<tr>
<td>A5500-48G EI TAA (2 slots)</td>
<td></td>
</tr>
<tr>
<td>A5500-24G SI (2 slots)</td>
<td></td>
</tr>
<tr>
<td>A5500-48G SI (2 slots)</td>
<td></td>
</tr>
<tr>
<td>A5500-24G-PoE+ EI (2 slots)</td>
<td>AC-input PSR150-A power supply: Connecting the AC power cord</td>
</tr>
<tr>
<td>A5500-24G-PoE+ EI TAA (2 slots)</td>
<td></td>
</tr>
<tr>
<td>A5500-48G-PoE+ EI (2 slot)</td>
<td>RPS input: Connecting the switch to a –52 to –55 VDC output RPS</td>
</tr>
<tr>
<td>A5500-48G-PoE+ EI TAA (2 slot)</td>
<td></td>
</tr>
<tr>
<td>A5500-24G-PoE+ SI (2 slots)</td>
<td></td>
</tr>
<tr>
<td>A5500-48G-PoE+ SI (2 slots)</td>
<td></td>
</tr>
<tr>
<td>A5500-24G-SFP EI (2 slots)</td>
<td>DC-input PSR150-D power supply: Connecting the PSR150-D to a –48 VDC power source</td>
</tr>
<tr>
<td>A5500-24G-SFP EI TAA (2 slots)</td>
<td></td>
</tr>
</tbody>
</table>

Connecting the AC power cord

To connect the AC power cord:

1. Wear an ESD-preventive wrist strap and make sure it makes good skin contact and is properly grounded.
2. Connect one end of the AC power cord to the AC-input power receptacle on the switch or the power supply (see Figure 17).
3. Connect the other end of the AC power cord to the AC power outlet.
Connecting the PSR150-D to a –48 VDC power source

⚠️ **CAUTION:**
Identify the positive (+) and negative (-) marks on the two wires to avoid connection mistakes.

connect the PSR150-D to a –48 VDC power source:

1. Wear an ESD-preventive wrist strap and make sure it makes good skin contact and is properly grounded.
2. Unpack the DC power cord, correctly orient the plug at one end of the cable with the power receptacle on the power supply, and insert the plug into the power receptacle (see callout 1 in Figure 18).

   The power receptacle is foolproof. If you cannot insert the plug into the receptacle, re-orient the plug rather than use excessive force to push it in.
3. Tighten the screws on the plug with a flat-blade screwdriver to secure the plug in the power receptacle (see callout 2 in Figure 18).
4. Connect the two wires at the other end of the power cord to a –48 VDC power source.

**NOTE:**
You can also connect the PSR150-D to an RPS that provides –48 VDC output. The connection procedure is the same as described in “Connecting the switch to a –52 to –55 VDC output RPS.”
Connecting the switch to a +12 VDC output RPS

This section applies to the A5500-24G EI (2 slots), A5500-24G EI TAA (2 slots), A5500-48G EI (2 slots), A5500-48G EI TAA (2 slots), A5500-24G SI (2 slots), and A5500-48G SI (2 slots) switches.

To connect these switches to the RPS that provides +12 VDC output:

1. Wear an ESD-preventive wrist strap and make sure it makes good skin contact and is properly grounded.
2. Loosen the captive screws on the RPS receptacle protective cover and remove the protective cover, as shown in Figure 19.
   If you do not use the +12 VDC RPS receptacle, install the protective cover.

   **Figure 19 Removing the RPS receptacle protective cover**

3. Unpack the RPS cable shipped with the RPS, identify the plug for connecting to the switch, correctly orient the plug with the RPS receptacle on the switch chassis, and insert the plug into the receptacle (see callout 1 in Figure 20).
   The RPS receptacle is foolproof. If you cannot insert the plug into the receptacle, re-orient the plug rather than use excessive force to push it in.
4. Tighten the screws on the plug with a flat-blade screwdriver to secure the plug in the RPS receptacle (see callout 2 in Figure 20).
5. Connect the other end of the power cord to the RPS.

   **Figure 20 Connecting the RPS cable to the +12 VDC RPS power receptacle of the switch**
Connecting the switch to a –52 to –55 VDC output RPS

This section applies to the A5500-24G-PoE+ EI (2 slots), A5500-24G-PoE+ EI TAA (2 slots), A5500-48G-PoE+ EI (2 slots), A5500-48G-PoE+ EI TAA (2 slots), A5500-24G-PoE+ SI (2 slots), and A5500-48G-PoE+ SI (2 slots) switches.

To connect these switches to the RPS that provides –52 to –55 VDC output:

1. Wear an ESD-preventive wrist strap and make sure it makes good skin contact and is properly grounded.
2. Unpack the RPS cable shipped with the RPS, identify the plug for connecting to the switch, correctly orient the plug with the RPS receptacle on the switch chassis, and insert the plug into the receptacle (see callout 1 in Figure 21).
   
   The RPS receptacle is foolproof. If you cannot insert the plug into the receptacle, re-orient the plug rather than use excessive force to push it in.
3. Tighten the screws on the plug with a flat-blade screwdriver to secure the plug in the RPS receptacle (see callout 2 in Figure 21).
4. Connect the other end of the power cord to the RPS.

Figure 21 Connecting the RPS cable to the –52 to –55 VDC RPS receptacle of the switch

Installing/removing an interface card

**IMPORTANT:**
To set up an A5500 EI or A5500 SI IRF fabric, you must install interface cards. To choose a correct slot for an interface card, see “Planning the cabling scheme.”

This section applies to all A5500 EI and A5500 SI switches. For the interface cards available for the switches, see “Interface cards.”

This section uses the LSPM2SP2P interface card as an example to describe the procedures of installing and removing an interface card.
Installing an interface card

To install an interface card in an interface card slot at the rear of the chassis:

1. Wear an ESD-preventive wrist strap and make sure it makes good skin contact and is properly grounded.

2. Loosen the mounting screws on the filler panel over the interface card slot with a Phillips screwdriver and remove the filler panel. Put away the removed filler panel for future use.

3. Hold the captive screws on the front panel of the interface card, and gently push the interface card in along the slot guide rail until the interface card is in close contact with the switch chassis (see callout 1 in Figure 23).

4. Tighten the captive screws with a Phillips screwdriver to fix the interface card in the slot (see callout 2 in Figure 23). When you tighten the captive screws, the torque must not be higher than 0.4 N-m.

Figure 22 Removing the filler panel over an interface card slot

Figure 23 Installing an interface card
Removing an interface card

⚠️ CAUTION:
Do not touch the surface-mounted components directly with your hands.

To remove an interface card:
1. Wear an ESD-preventive wrist strap and make sure it makes good skin contact and is properly grounded.
2. Use a Phillips screwdriver to completely loosen the captive screws at both sides of the interface card.
3. Gently pull the interface card along the guide rails until it completely comes out of the switch chassis.
4. If no new card is to be installed, install the filler panel to prevent dust and ensure good ventilation in the switch.

Installing/removing a dedicated CX4/SFP+ cable

The dedicated CX4 and SFP+ cables for the A5500 EI and A5500 SI switches are hot swappable.

Installing a dedicated CX4/SFP+ cable

⚠️ CAUTION:
The bend radius for a cable must be at least eight times the cable diameter.

To connect a CX4 or SFP+ cable to a port on a CX4/SFP+ interface card:
1. Wear an ESD-preventive wrist strap and make sure it makes good skin contact is properly grounded.
2. Correctly orient one connector of the cable with the port and insert the cable connector into the port.

Removing a dedicated CX4/SFP+ cable

To remove a CX4 or SFP+ cable from a port on a CX4/SFP+ interface card:
1. Wear an ESD-preventive wrist strap and make sure it makes good skin contact and is properly grounded.
2. Hold the cable connector and pull the pull latch of the connector to remove the cable from the switch.
Verifying the installation

After you complete the installation, verify that:

- There is enough space for heat dissipation around the switch, and the rack or workbench is stable.
- The grounding cable is securely connected.
- The correct power source is used.
- The power cords are properly connected.
- All the interface cables are cabled indoors. If any cable is routed outdoors, verify that the socket strip with lightning protection and lightning arresters for network ports have been properly connected.
Accessing the switch for the first time

Setting up the configuration environment

The first time you access the switch you must use a console cable to connect a console terminal, for example, a PC, to the console port on the switch.

Figure 24 Connecting the console port to a terminal

Connecting the console cable

A console cable is an 8-core shielded cable, with a crimped RJ-45 connector at one end for connecting to the console port of the switch, and a DB-9 female connector at the other end for connecting to the serial port on the console terminal.

Figure 25 Console cable

To connect a terminal, for example, a PC, to the switch:

1. Plug the DB-9 female connector of the console cable to the serial port of the PC.
2. Connect the RJ-45 connector to the console port of the switch. Identify the mark on the console port and make sure that you are connecting to the correct port.
NOTE:
- The serial ports on PCs do not support hot swapping. If the switch has been powered on, connect the console cable to the PC before connecting to the switch. When you disconnect the cable, first disconnect from the switch.

Setting terminal parameters

To configure and manage the switch, you must run a terminal emulator program on the console terminal. The following are the required terminal settings:
- Bits per second—9,600
- Data bits—8
- Parity—None
- Stop bits—1
- Flow control—None
- Emulation—VT100

To set terminal parameters, for example, on a Windows XP HyperTerminal:
1. Select Start > All Programs > Accessories > Communications > HyperTerminal.
   The Connection Description dialog box appears.
2. Enter the name of the new connection in the Name field and click OK.

**Figure 26 Connection description**

3. Select the serial port to be used from the Connect using list, and click OK.
4. Set **Bits per second** to 9600, **Data bits** to 8, **Parity** to None, **Stop bits** to 1, and **Flow control** to None, and click **OK**.

**Figure 28 Set the serial port parameters**

5. Select **File > Properties** in the HyperTerminal window.
6. On the **Settings** tab, set the emulation to **VT100** and click **OK**.
Powering on the switch

Before powering on the switch, verify that:

- The power cord is properly connected.
- The input power voltage meets the requirement of the switch.
- The console cable is properly connected, the terminal or PC used for configuration has started, and the configuration parameters have been correctly set.

The system has two startup modes: full startup and fast startup. By default, the system starts up in fast mode and the waiting time is one second. In full startup mode, the waiting time is five seconds. For how to change the startup mode, see “Changing the startup mode.”

Power on the switch and you will see the following information, for example, an A5500-24G-SFP EI (2 slot) switch:

Starting......

********************************************************************************
*                                                                            *
*    HP A5500-24G-SFP EI Switch with 2 Interface Slots BOOTROM, Version 604  *
*                                                                            *
********************************************************************************

Copyright (c) 2010-2011 Hewlett-Packard Development Company, L.P.
Press Ctrl-B to enter Boot Menu... 1

Press Ctrl + B at the prompt within one second to access the Boot menu, or wait for the system to automatically start up.

- If you press Ctrl + B within one second, the system displays a prompt for password:
  Password:
  Press Enter at the prompt the first time you access the switch and you can see the following Boot menu:

  BOOT MENU

  1. Download application file to flash
  2. Select application file to boot
  3. Display all files in flash
  4. Delete file from flash
  5. Modify bootrom password
  6. Enter bootrom upgrade menu
  7. Skip current configuration file
  8. Set bootrom password recovery
  9. Set switch startup mode
  0. Reboot

  Enter your choice(0-9):

### Table 9 Boot menu options

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Download application file to flash</td>
<td>Download a system software image file to the Flash memory.</td>
</tr>
<tr>
<td>2. Select application file to boot</td>
<td>Select the system software image file to boot.</td>
</tr>
<tr>
<td>3. Display all files in flash</td>
<td>Display all files in the Flash memory.</td>
</tr>
<tr>
<td>4. Delete file from flash</td>
<td>Delete files from the Flash memory.</td>
</tr>
<tr>
<td>5. Modify bootrom password</td>
<td>Modify the Boot ROM password.</td>
</tr>
<tr>
<td>6. Enter bootrom upgrade menu</td>
<td>Access the Boot ROM update menu.</td>
</tr>
<tr>
<td>7. Skip current configuration file</td>
<td>Start the switch with the factory default configuration. This is a one-time operation and does not take effect at the next reboot. You use this option when you forget the console login password.</td>
</tr>
<tr>
<td>8. Set bootrom password recovery</td>
<td>Disable or enable the Boot ROM password recovery function. By default, Boot ROM recovery is enabled. You can disable this function to protect system security.</td>
</tr>
<tr>
<td>Item</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>9. Set switch startup mode</td>
<td>Set the startup mode to full mode or fast mode, as described in “Changing the startup mode.”</td>
</tr>
<tr>
<td>10. Reboot</td>
<td>Restart the switch.</td>
</tr>
</tbody>
</table>

**NOTE:**

The system by default has no Boot ROM password. HP recommends that you set a Boot ROM password immediately after you access the Boot menu.

- If you don’t do anything or press any key other than **Ctrl + B** within one second, the system automatically starts up when the remaining time becomes zero, and displays the following information:

  Auto-booting...
  Decompress Image..................................................
  .............................................................................
  .............................................................................
  .............................................................................
  .............................................................................
  .............................................................................
  .............................................................................
  .............................................................................
  .............................................................................
  .............................................................................
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  .............................................................................
  .............................................................................
  .............................................................................
  .............................................................................
  .............................................................................
  .............................................................................
  ...........................................OK!

User interface aux0 is available.

Press **ENTER** to get started.

Press **Enter** at the prompt and you can configure the switch when the prompt <HP> appears.
Changing the startup mode

By default, the system starts up in fast mode. To change to the full startup mode, press Ctrl + B within one second to access the Boot menu:

BOOT MENU

1. Download application file to flash
2. Select application file to boot
3. Display all files in flash
4. Delete file from flash
5. Modify bootrom password
6. Enter bootrom upgrade menu
7. Skip current configuration file
8. Set bootrom password recovery
9. Set switch startup mode
0. Reboot

Enter your choice(0-9):

Enter 9 to change the startup mode.
The current mode is fast startup mode!
Are you sure you want to change it to full startup mode? Yes or No(Y/N)

Enter Y at the prompt.
Setting startup mode...done!

BOOT MENU

1. Download application file to flash
2. Select application file to boot
3. Display all files in flash
4. Delete file from flash
5. Modify bootrom password
6. Enter bootrom upgrade menu
7. Skip current configuration file
8. Set bootrom password recovery
9. Set switch startup mode
0. Reboot

Enter your choice(0-9):
Enter 0 at the prompt. The system reboots in full startup mode and displays the following information:
Starting......

********************************************************************************
*                                                                              *
*    HP A5500-24G-SFP EI Switch with 2 Interface Slots BOOTROM, Version 604    *
*                                                                              *
********************************************************************************

Copyright (c) 2010-2011 Hewlett-Packard Development Company, L.P.
Creation date : Feb 18 2011, 17:01:57
CPU Clock Speed : 533MHz
BUS Clock Speed : 133MHz
Memory Size : 256MB
Mac Address : 00e0fc005502

Press Ctrl-B to enter Boot Menu... 5

In full startup mode, you must press Ctrl + B within five seconds to access the Boot menu. If you don’t do anything or press any key other than Ctrl + B within five seconds, the system automatically starts up and displays the following information:
Auto-booting...
Decompress Image................................................................
................................................................................
................................................................................
................................................................................
................................................................................
................................................................................
................................................................................
................................................................................
................................................................................
................................................................................
................................................................................
................................................................................
................................................................................
................................................................................
................................................................................
................................................................................
................................................................................
...........................................OK!

Board checking..................LSP2LTSUA
SDRAM fast selftest.........................OK!
Flash fast selftest.........................OK!
CPLD selftest............................OK!
Switch chip selftest......................OK!
PHY selftest..............................OK!
Subslot 1 (LSP2CX2P) selftest.........OK!
Please check leds.....................FINISHED!
User interface aux0 is available.

Press ENTER to get started.

Press Enter at the prompt, and you can configure the switch when the prompt <HP> appears.

For more information about the configuration commands and CLI, see the configuration guides and command references for your switch.
Setting up an IRF fabric

You can use HP IRF technology to connect and virtualize A5500 EI switches or A5500 SI switches into a virtual switch called an “IRF fabric” or “IRF virtual device” for flattened network topology, and high availability, scalability, and manageability.

An IRF fabric cannot have both A5500 EI and A5500 SI switches.

IRF fabric setup flowchart

Figure 31 IRF fabric setup flowchart

Start

Plan IRF fabric setup

Install IRF member switches

Connect grounding cables, power supplies (optional) and power cords

Power on the switches

Install Interface cards

Configure basic IRF settings

Connect the physical IRF ports

Switches elected as slaves, reboot and the IRF fabric is established automatically

End

To set up an IRF fabric:
### Step Description

1. **Plan IRF fabric setup**
   - Plan the installation site and IRF fabric setup parameters:
     - Planning IRF fabric size and the installation site
     - Identifying the master switch and planning IRF member IDs
     - Planning IRF topology and connections
     - Identifying physical IRF ports on the member switches
     - Planning the cabling scheme

2. **Install IRF member switches**
   - See “Installing the switch in a 19-inch rack” and “Mounting the switch on a workbench.”

3. **Connect the grounding cable, power supplies (optional), and power cords**
   - See “Grounding the switch” and “Connecting the power cord.”
   - If an A5500-24G-SFP EI (2 slots) or A5500-24G-SFP EI TAA (2 slots) switch is used, also see “Installing/removing a power supply.”

4. **Power on the switches**
   - N/A

5. **Install interface cards**
   - See “Installing/removing an interface card.”

6. **Configure basic IRF settings**
   - See “Configuring basic IRF settings.”

7. **Connect the physical IRF ports**
   - See “Connecting the physical IRF ports.”
   - All switches except the master switch automatically reboot, and the IRF fabric is established.

---

### Planning IRF fabric setup

#### Planning IRF fabric size and the installation site

Choose switch models and identify the number of required IRF member switches, depending on the user density and upstream bandwidth requirements. The switching capacity of an IRF fabric equals the total switching capacities of all member switches.

**NOTE:**
As your business grows, you can plug a switch into an IRF fabric to increase the switching capacity without any topology change or replacement.

#### Identifying the master switch and planning IRF member IDs

Determine which switch you want to use as the master for managing all member switches in the IRF fabric. An IRF fabric has only one master switch. You configure and manage all member switches in the IRF fabric at the command line interface of the master switch.

IRF member switches will automatically elect a master. You can affect the election result by assigning a high member priority to the intended master switch. For more information about master election, see *HP A5500 EI & A5500 SI Switch Series IRF Configuration Guide*.

Prepare an IRF member ID assignment scheme. An IRF fabric uses member IDs to uniquely identify and manage its members, and you must assign each IRF member switch a unique member ID.
Planning IRF topology and connections

You can create an IRF fabric in daisy chain topology, or more reliably, ring topology. In ring topology, the failure of one IRF link does not cause the IRF fabric to split as in daisy chain topology. Rather, the IRF fabric changes to a daisy chain topology without interrupting network services.

You connect the IRF member switches through IRF ports. An IRF port is a logical interface for the internal connection between IRF member switches. Each IRF member switch has two IRF ports: IRF-port 1 and IRF-port 2. To use an IRF port, you must bind physical ports to it.

When connecting two neighboring IRF member switches, you must connect the physical ports of IRF-port 1 on one switch to the physical ports of IRF-port 2 on the other switch.

You can bind several physical ports to an IRF port to create an aggregate IRF link for increased bandwidth and availability.

Figure 32 and Figure 33 show the topologies of an IRF fabric made up of three A5500 EI or A5500 SI switches. The IRF port connections in the two figures are for illustration only, and more connection methods are available.

**Figure 32 IRF fabric in daisy chain topology**

**Figure 33 IRF fabric in ring topology**
Identifying physical IRF ports on the member switches

IMPORTANT:
All the switches in a ring topology and the non-edge switches in a daisy chain topology must have at least one two-port interface card or two one-port interface cards.

Only the 10-GE ports on the IRF-capable interface cards listed in “Interface cards” can provide IRF connections for the A5500 EI and A5500 SI switches. To use the IRF feature, you must order the cards separately.

Planning the cabling scheme

When you plan the cabling scheme, follow these guidelines:

- Ports assigned to the same IRF port must be on the same interface card.
- For long-distance connections, use XFP or SFP+ transceiver modules and fibers. For short-distance connections, use CX4 or SFP+ cables. For more information, see “Interface cards” and “SFP/SFP+/XFP transceiver modules and SFP+/CX4 cables.”
- If 2-port interface cards are used and the IRF links are not aggregate:
  - You can connect the interface card in slot 1 (MOD 1) on a member switch to the MOD 1 or MOD 2 card on its neighboring switch.
  - Connect the left port on one interface card to the right port on the other interface card, as shown in Figure 34.

**Figure 34 Using 2-port interface cards to set up single-link IRF connection**

- If 2-port interface cards are used and IRF links are aggregate:
  - Connect the interface card MOD 1 on one switch to the interface card MOD 2 on the other switch.
  - A port on one interface card can connect to any port on the other interface card, as shown in Figure 35. For example, you can connect the left port on one interface card to the left or right port on the other interface card.
Figure 35 Use 2-port interface cards to set up multi-link IRF connection

- If both of the neighboring switches use 1-port interface cards, the port on MOD 1 on one switch must connect to the port on MOD 2 on the other switch (see callout 1 in Figure 36).
- If one switch uses a 1-port interface card but the other switch uses a 2-port interface card:
  - If the 1-port interface card is in the MOD 1 slot, the port on the card must connect to the right port on the 2-port interface card (see callout 2 in Figure 36.)
  - If the 1-port interface card is in the MOD 2 slot, the port on the card must connect to the left port on the 2-port interface card.

Figure 36 Cable connections for an IRF fabric with 1-port interface cards

Configuring basic IRF settings

After you install the IRF member switches, power on the switches, and log in to each IRF member switch (see HP A5500 EI & A5500 SI Switch Series Fundamentals Configuration Guide) to configure their member IDs, member priorities, and IRF port bindings.

Follow these guidelines when you configure the switches:
- Assign the master switch higher member priority than any other switch.
- Bind physical ports to IRF port 1 on one switch and to IRF port 2 on the other switch.
- Execute the `irf-port-configuration active` command to activate the IRF port configuration.
- Execute the `display irf configuration` command to verify the basic IRF settings.
For more information about configuring basic IRF settings, see *HP A5500 EI & A5500 SI Switch Series IRF Configuration Guide*.

## Connecting the physical IRF ports

Wear an ESD-preventive wrist strap when you connect the physical IRF ports. For how to connect them, see *Pluggable SFP/SFP+/XFP Transceiver Modules Installation Guide*.

Connect the IRF member switches as planned in “Setting up an IRF fabric”.

## Accessing the IRF fabric to verify the configuration

When you are finished configuring basic IRF settings and connecting IRF ports, follow these steps to verify the basic functionality of the IRF fabric:

1. Log in to the IRF fabric through the console port of any member switch.
2. Create a Layer 3 interface, assign it an IP address, and make sure that the IRF fabric and the remote network management station can reach each other.
3. Use Telnet, web, or SNMP to access the IRF fabric from the network management station. See *HP A5500 EI & A5500 SI Switch Series Fundamentals Configuration Guide*.
4. Check that you can manage all member switches as if they were one node.
5. Display the running status of the IRF fabric by using the commands in Table 10.

### Table 10 Displaying and maintaining IRF configuration and running status

<table>
<thead>
<tr>
<th>To do …</th>
<th>Use the command…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display information about the IRF fabric</td>
<td>display irf</td>
</tr>
<tr>
<td>Display all members’ configurations that take effect after switch reboots</td>
<td>display irf configuration</td>
</tr>
<tr>
<td>Display topology information about the IRF fabric</td>
<td>display irf topology</td>
</tr>
</tbody>
</table>

**NOTE:**

To avoid IP address collision and network problems, configure at least one MAD mechanism to detect the presence of multiple identical IRF fabrics and handle collisions. For more information about MAD detection, see the *HP A5500 EI & A5500 SI Switch Series IRF Configuration Guide*. 

---

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## Maintenance and troubleshooting

### Password loss

#### Console login password loss

If you forget the console login password, access the Boot menu:

```
BOOT  MENU
```

1. Download application file to flash
2. Select application file to boot
3. Display all files in flash
4. Delete file from flash
5. Modify bootrom password
6. Enter bootrom upgrade menu
7. Skip current configuration file
8. Set bootrom password recovery
9. Set switch startup mode
0. Reboot

Enter your choice(0-9):

Enter 7 and restart the switch. The switch reboots with empty configuration, and you can log in through the console port without entering the password to check the configuration file for the user password.

#### Boot ROM password loss

Contact HP for help.

### Power supply failure

#### Fixed power supply failure

Except the A5500-24G-SFP E1 (2 slots) and A5500-24G-SFP E1 TAA (2 slots) switches, all A5500 E1 and A5500 SI switches use fixed power supplies and support three input modes: AC input, RPS DC input, and concurrent AC and RPS DC inputs.

You can look at the system status LED and the RPS status LED on the front panel of the switch to identify a power failure. For more information, see “LEDs.”
AC input

If the system status LED is off, an AC input failure has occurred. Verify the following items:

- The AC power cord is securely connected to the switch, and the AC-input power receptacle on the switch and the connected AC power outlet are in good condition.
- The external AC power system is correctly working.
- The operating temperature of the switch is in the normal range, and the power module has good ventilation. Over-temperature can cause the power module to stop working and enter the protection state.

RPS DC input

If the system status LED or RPS status LED is off, an RPS input failure has occurred. Verify the following items:

- The switch is securely connected to the RPS.
- The RPS is correctly working.
- The operating temperature of the switch is in the normal range, and the power supply has good ventilation. Over-temperature can cause the power supply to stop working and enter the protection state.

Concurrent RPS and AC inputs

1. If the system status LED is off, the AC power supply and the RPS both have an input failure. Verify the following items:
   - The AC power cord is securely connected to the switch, and the AC-input power receptacle on the switch and the connected AC power outlet are in good condition.
   - The external AC power system is correctly working.
   - The switch is securely connected to the RPS.
   - The RPS is correctly working.
   - The operating temperature of the switch is in the normal range, and the power supply has good ventilation. Over-temperature can cause the power supply to stop working and enter the protection state.

2. If the system status LED is on but the RPS status LED is steady yellow, an AC input failure has occurred. Verify the following items:
   - The AC power cord is securely connected to the switch, and the AC-input power receptacle on the switch and the connected AC power outlet are in good condition.
   - The external AC power system is correctly working.

3. If the system status LED is on but the RPS status LED is off, an RPS input failure has occurred. Verify the following items:
   - The switch is securely connected to the RPS.
   - The RPS is correctly working.

NOTE:
If the problem persists, contact HP for help.
Hot swappable power supply failure

This section applies to the A5500-24G-SFP EI (2 slots) and A5500-24G-SFP EI TAA (2 slots) switches.

You can look at the PWR1 or PWR2 LED (see Table 17) on the front panel of an A5500-24G-SFP EI (2 slots) or A5500-24G-SFP EI TAA (2 slots) switch and the LEDs on the power supply to identify a power supply failure.

If the power supply system is correctly working, the power supply LEDs are steady green. If the LEDs behave in any other way (see Table 17), verify the following items:

- The power cord is properly connected.
- The power supply meets the requirement.
- The operating temperature of the switch is in the normal range and the power supply has good ventilation.

NOTE:
If the problem persists, contact your local sales agent or service engineer.

To replace a hot swappable power supply, see “Installing/removing a power supply.”

Fan failure

You can look at the system status LED and the seven-segment LED of the switch to identify a fan failure. If both LEDs are behaving as described in Table 11, a fan failure occurs.

Table 11 LED behaviors that identify a fan failure

<table>
<thead>
<tr>
<th>LED</th>
<th>Mark</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>System status LED</td>
<td>PWR/SYS</td>
<td>Steady red</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The LED flashes F for fan failure.</td>
</tr>
<tr>
<td>Seven-segment LED</td>
<td>Unit</td>
<td>F</td>
</tr>
</tbody>
</table>

The A5500 EI and A5500 SI switches use fixed fans. If a fan failure occurs, contact HP for help and do not attempt to fix the problem yourself.

Configuration terminal problems

If the configuration environment setup is correct, the configuration terminal displays booting information when the switch is powered on. If the setup is incorrect, the configuration terminal would display nothing or garbled text.

No terminal display

If the configuration terminal displays nothing after the switch is powered on, verify the following items:

- The power supply is supplying power to the switch.
- The console cable is properly connected.
- The console cable has no problem and the terminal settings are correct.
Garbled terminal display
If terminal display is garbled, verify that the following settings are configured for the terminal, for example, HyperTerminal:

- Baud rate—9,600
- Data bits—8
- Parity—none
- Stop bits—1
- Flow control—none
- Emulation—VT100
Support and other resources

Contacting HP

For worldwide technical support information, see the HP support website:

http://www.hp.com/support

Before contacting HP, collect the following information:

- Product model names and numbers
- Technical support registration number (if applicable)
- Product serial numbers
- Error messages
- Operating system type and revision level
- Detailed questions

Subscription service

HP recommends that you register your product at the Subscriber’s Choice for Business website:

http://www.hp.com/go/wwalerts

After registering, you will receive email notification of product enhancements, new driver versions, firmware updates, and other product resources.

Related information

Documents

To find related documents, browse to the Manuals page of the HP Business Support Center website:

http://www.hp.com/support/manuals

- For related documentation, navigate to the Networking section, and select a networking category.
- For a complete list of acronyms and their definitions, see HP A-Series Acronyms.

Websites

- HP.com http://www.hp.com
- HP Networking http://www.hp.com/go/networking
- HP manuals http://www.hp.com/support/manuals
- HP download drivers and software http://www.hp.com/support/downloads
- HP software depot http://www.software.hp.com
# Conventions

This section describes the conventions used in this documentation set.

## Command conventions

<table>
<thead>
<tr>
<th>Convention</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boldface</strong></td>
<td><strong>Bold</strong> text represents commands and keywords that you enter literally as shown.</td>
</tr>
<tr>
<td><em>Italic</em></td>
<td><em>Italic</em> text represents arguments that you replace with actual values.</td>
</tr>
<tr>
<td>[ ]</td>
<td>Square brackets enclose syntax choices (keywords or arguments) that are optional.</td>
</tr>
<tr>
<td>{ x</td>
<td>y</td>
</tr>
<tr>
<td>[ x</td>
<td>y</td>
</tr>
<tr>
<td>{ x</td>
<td>y</td>
</tr>
<tr>
<td>[ x</td>
<td>y</td>
</tr>
<tr>
<td>&amp;&lt;1-n&gt;</td>
<td>The argument or keyword and argument combination before the ampersand (&amp;) sign can be entered 1 to n times.</td>
</tr>
<tr>
<td>#</td>
<td>A line that starts with a pound (#) sign is comments.</td>
</tr>
</tbody>
</table>

## GUI conventions

<table>
<thead>
<tr>
<th>Convention</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boldface</strong></td>
<td>Window names, button names, field names, and menu items are in bold text. For example, the New User window appears; click OK.</td>
</tr>
<tr>
<td>&gt;</td>
<td>Multi-level menus are separated by angle brackets. For example, File &gt; Create &gt; Folder.</td>
</tr>
</tbody>
</table>

## Symbols

<table>
<thead>
<tr>
<th>Convention</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>⚠️ WARNING</td>
<td>An alert that calls attention to important information that if not understood or followed can result in personal injury.</td>
</tr>
<tr>
<td>⚠️ CAUTION</td>
<td>An alert that calls attention to important information that if not understood or followed can result in data loss, data corruption, or damage to hardware or software.</td>
</tr>
<tr>
<td>🚨 IMPORTANT</td>
<td>An alert that calls attention to essential information.</td>
</tr>
<tr>
<td>📝 NOTE</td>
<td>An alert that contains additional or supplementary information.</td>
</tr>
<tr>
<td>💡 TIP</td>
<td>An alert that provides helpful information.</td>
</tr>
</tbody>
</table>
Network topology icons

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="icon1.png" alt="Icon" /></td>
<td>Represents a generic network device, such as a router, switch, or firewall.</td>
</tr>
<tr>
<td><img src="icon2.png" alt="Icon" /></td>
<td>Represents a routing-capable device, such as a router or Layer 3 switch.</td>
</tr>
<tr>
<td><img src="icon3.png" alt="Icon" /></td>
<td>Represents a generic switch, such as a Layer 2 or Layer 3 switch, or a router that supports Layer 2 forwarding and other Layer 2 features.</td>
</tr>
</tbody>
</table>

Port numbering in examples

The port numbers in this document are for illustration only and might be unavailable on your device.
### Physical specifications

#### Chassis dimensions and weights

<table>
<thead>
<tr>
<th>Chassis</th>
<th>Dimensions Dimensions (H × W × D)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>A5500-24G SI (2 slots)</td>
<td>43.6 × 440 × 300 mm (1.72 × 17.32 × 11.81 in)</td>
<td>&lt; 4.5 kg (9.92 lb)</td>
</tr>
<tr>
<td>A5500-24G EI (2 slots)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-24G EI TAA (2 slots)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-48G EI (2 slots)</td>
<td>43.6 × 440 × 300 mm (1.72 × 17.32 × 11.81 in)</td>
<td>&lt; 5 kg (11.02 lb)</td>
</tr>
<tr>
<td>A5500-48G EI TAA (2 slots)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-48G SI (2 slots)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-24G-SFP EI (2 slots)</td>
<td>43.6 × 440 × 360 mm (1.72 × 17.32 × 14.17 in)</td>
<td>&lt; 6 kg (13.23 lb)</td>
</tr>
<tr>
<td>A5500-24G-SFP EI TAA (2 slots)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-24G-PoE+ SI (2 slots)</td>
<td>43.6 × 440 × 420 mm (1.72 × 17.32 × 16.54 in)</td>
<td>&lt; 7.0 kg (15.43 lb)</td>
</tr>
<tr>
<td>A5500-24G-PoE+ EI (2 slots)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-24G-PoE+ EI TAA (2 slots)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-48G-PoE+ SI (2 slots)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-48G-PoE+ EI (2 slots)</td>
<td>43.6 × 440 × 420 mm (1.72 × 17.32 × 16.54 in)</td>
<td>&lt; 8.0 kg (17.64 lb)</td>
</tr>
<tr>
<td>A5500-48G-PoE+ EI TAA (2 slots)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Ports and interface card slots

<table>
<thead>
<tr>
<th>Chassis</th>
<th>Console ports</th>
<th>10/100/1000Base-T auto-sensing Ethernet ports</th>
<th>SFP ports</th>
<th>Interface card slots</th>
</tr>
</thead>
<tbody>
<tr>
<td>A5500-24G EI (2 slots)</td>
<td>1</td>
<td>24</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>A5500-24G EI TAA (2 slots)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-24G SI (2 slots)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-24G-PoE+ EI (2 slots)</td>
<td>1</td>
<td>24, PoE+</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>A5500-24G-PoE+ EI TAA (2 slots)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-24G-PoE+ SI (2 slots)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-24G-SFP EI (2 slots)</td>
<td>1</td>
<td>8</td>
<td>24</td>
<td>2</td>
</tr>
<tr>
<td>A5500-24G-SFP EI TAA (2 slots)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Chassis panel views

This section describes the chassis panel views of the A5500 EI and A5500 SI switches.

#### A5500-24G EI (2 slots)/A5500-24G EI TAA (2 slots)/A5500-24G SI (2 slots) panel views

**Figure 37 Front panel**

<table>
<thead>
<tr>
<th>Chassis</th>
<th>Console ports</th>
<th>10/100/1000Base-T auto-sensing Ethernet ports</th>
<th>SFP ports</th>
<th>Interface card slots</th>
</tr>
</thead>
<tbody>
<tr>
<td>A5500-48G EI (2 slots)</td>
<td>1</td>
<td>48</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>A5500-48G EI TAA (2 slots)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-48G SI (2 slots)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-48G-PoE+ EI (2 slots)</td>
<td>1</td>
<td>48, PoE+</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>A5500-48G-PoE+ EI TAA (2 slots)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-48G-PoE+ SI (2 slots)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:**
- On an A5500-24G-SFP EI (2 slots) or A5500-24G-SFP EI TAA (2 slots) switch, the last eight SFP ports and the eight 10/100/1000Base-T Ethernet ports are copper/fiber combo ports in pairs, as shown in Table 14. They form eight combo interfaces. When one port in a pair is activated, the other port automatically shuts down.
- On any other A5500 EI or A5500 SI switch, the last four 10/100/1000Base-T Ethernet ports and the four SFP ports are copper/fiber combo ports in pairs, as shown in Table 14. They form four combo interfaces. When one port in a pair is activated, the other port automatically shuts down.
Figure 38 Rear panel

1. AC power input
2. RPS receptacle (shipped with a protective cover)
3. Grounding screw
4. Interface card slot 1 (MOD1)
5. Interface card slot 2 (MOD2)

NOTE:
The A5500-24G EI (2 slots), A5500-24G EI TAA (2 slots), and A5500-24G SI (2 slots) switches come with the expansion interface card slots covered by filler panels.

A5500-48G EI (2 slots)/A5500-48G EI TAA (2 slots)/A5500-48G SI (2 slots) panel views

Figure 39 Front panel

1. 10/100/1000Base-T auto-sensing Ethernet port
2. 10/100/1000Base-T Ethernet port LED
3. Console port
4. Seven-segment LED (Unit)
5. Port mode LED (Mode)
6. System status LED (PWR)
7. RPS status LED (RPS)
8. Interface card 1 status LED (MOD1)
9. Interface card 2 status LED (MOD2)
10. Port LED mode switching button
11. 1000Base-X SFP port
12. 1000Base-X SFP port LED
Figure 40 Rear panel

1. AC power input
2. RPS receptacle (shipped with a protective cover)
3. Grounding screw
4. Interface card slot 1 (MOD1)
5. Interface card slot 2 (MOD2)

NOTE:
The A5500-48G EI (2 slots), A5500-48G EI TAA (2 slots), and A5500-48G SI (2 slots) switches come with the expansion interface card slots covered by filler panels.

A5500-24G-SFP EI (2 slots)/A5500-24G-SFP EI TAA (2 slots) panel views

Figure 41 Front panel

1. SFP port
2. SFP port LED
3. 10/100/1000Base-T auto-sensing Ethernet
4. 10/100/1000Base-T Ethernet port LED
5. Console port
6. Port LED mode switching button
7. Interface card 1 status LED (MOD1)
8. Interface card 2 status LED (MOD2)
9. System status LED (SYS)
10. Power supply 1 status LED (PWR1)
11. Power supply 2 status LED (PWR2)
12. Port mode LED (Mode)
13. Seven-segment LED (Unit)
### A5500-24G-PoE+ EI (2 slots)/A5500-24G-PoE+ EI TAA (2 slots)/A5500-24G-PoE+ SI (2 slots) panel views

#### Figure 42 Rear panel

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Grounding screw</td>
</tr>
<tr>
<td>2</td>
<td>Power supply slot 1</td>
</tr>
<tr>
<td>3</td>
<td>Power supply slot 2</td>
</tr>
<tr>
<td>4</td>
<td>Interface card slot 1 (MOD1)</td>
</tr>
<tr>
<td>5</td>
<td>Interface card slot 2 (MOD2)</td>
</tr>
</tbody>
</table>

**NOTE:**
- The A5500-24G-SFP EI (2 slots) and A5500-24G-SFP EI TAA (2 slots) switches come with the expansion interface card slots covered by filler panels.
- The A5500-24G-SFP EI (2 slots) and A5500-24G-SFP EI TAA (2 slots) switches come with one power supply filler panel. If you use only one power supply, install the filler panel over the empty power supply slot to prevent dust and ensure normal ventilation of the chassis. In this figure, a PSR150-A is installed in power supply slot 1 and a PSR150-D is installed in power supply slot 2.

#### A5500-24G-PoE+ EI (2 slots)/A5500-24G-PoE+ EI TAA (2 slots)/A5500-24G-PoE+ SI (2 slots) panel views

#### Figure 43 Front panel

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10/100/1000Base-T auto-sensing Ethernet port</td>
</tr>
<tr>
<td>2</td>
<td>10/100/1000Base-T Ethernet port LED</td>
</tr>
<tr>
<td>3</td>
<td>1000Base-X SFP port</td>
</tr>
<tr>
<td>4</td>
<td>1000Base-X SFP port LED</td>
</tr>
<tr>
<td>5</td>
<td>Console port</td>
</tr>
<tr>
<td>6</td>
<td>Seven-segment LED (Unit)</td>
</tr>
<tr>
<td>7</td>
<td>Port mode LED (Mode)</td>
</tr>
<tr>
<td>8</td>
<td>System status LED (PWR)</td>
</tr>
<tr>
<td>9</td>
<td>RPS status LED (RPS)</td>
</tr>
<tr>
<td>10</td>
<td>Interface card 1 status LED (MOD1)</td>
</tr>
<tr>
<td>11</td>
<td>Interface card 2 status LED (MOD2)</td>
</tr>
<tr>
<td>12</td>
<td>Port LED mode switching button</td>
</tr>
</tbody>
</table>
Figure 44 Rear panel

- (1) RPS receptacle
- (2) AC power input
- (3) Grounding screw
- (4) Interface card slot 1 (MOD1)
- (5) Interface card slot 2 (MOD2)

NOTE:
The A5500-24G-PoE+ EI (2 slots), A5500-24G-PoE+ EI TAA (2 slots), and A5500-24G-PoE+ SI (2 slots) switches come with the expansion interface card slots covered by filler panels.

A5500-48G-PoE+ EI (2 slots)/A5500-48G-PoE+ EI TAA (2 slots)/A5500-48G-PoE+ SI (2 slots) panel views

Figure 45 Front panel

- (1) 10/100/1000Base-T auto-sensing Ethernet port
- (2) 10/100/1000Base-T Ethernet port LED
- (3) Console port
- (4) Seven-segment LED (Unit)
- (5) Port mode LED (Mode)
- (6) System status LED (PWR)
- (7) RPS status LED (RPS)
- (8) Interface card 1 status LED (MOD1)
- (9) Interface card 2 status LED (MOD2)
- (10) Port LED mode switching button
- (11) 1000Base-X SFP port
- (12) 1000Base-X SFP port LED
Environmental specifications

<table>
<thead>
<tr>
<th>Chassis</th>
<th>Operating temperature</th>
<th>Relative humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>All chassis</td>
<td>0°C to 45°C (32°F to 113°F)</td>
<td>10% to 90%, noncondensing</td>
</tr>
</tbody>
</table>

Power specifications

Power input types

<table>
<thead>
<tr>
<th>Chassis</th>
<th>AC-input power receptacle</th>
<th>RPS receptacle</th>
<th>Power supply slots</th>
</tr>
</thead>
<tbody>
<tr>
<td>A5500-24G-SFP EI (2 slots) and A5500-24G-SFP EI TAA (2 slots)</td>
<td>N/A</td>
<td>N/A</td>
<td>2 (For the available power supplies, see “Hot swappable power supplies”).</td>
</tr>
<tr>
<td>Other A5500 EI and A5500 SI switches</td>
<td>1</td>
<td>1</td>
<td>N/A</td>
</tr>
</tbody>
</table>

The RPS can supply power to your switch when the AC power line fails or cannot supply sufficient power.

AC input voltage specifications

<table>
<thead>
<tr>
<th>Chassis</th>
<th>Rated voltage range</th>
<th>Max voltage range</th>
</tr>
</thead>
<tbody>
<tr>
<td>All chassis</td>
<td>100 VAC to 240 VAC, 50 Hz or 60 Hz</td>
<td>90 VAC to 264 VAC, 47 Hz to 63 Hz</td>
</tr>
</tbody>
</table>
## RPS DC input voltage specifications and RPS compatibility

<table>
<thead>
<tr>
<th>Chassis</th>
<th>RPS input rated voltage range</th>
<th>Compatible RPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A5500-24G EI (2 slots)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-24G EI TAA (2 slots)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-24G SI (2 slots)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-48G EI (2 slots)</td>
<td>10.8 VDC to 13.2 VDC</td>
<td>A-RPS800 (JD183A)</td>
</tr>
<tr>
<td>A5500-48G EI TAA (2 slots)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-48G SI (2 slots)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-24G-PoE+ EI (2 slots)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-24G-PoE+ EI TAA (2 slots)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-24G-PoE+ SI (2 slots)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-48G-PoE+ EI (2 slots)</td>
<td>–52 VDC to –55 VDC</td>
<td>A-RPS1600 (JG136A)</td>
</tr>
<tr>
<td>A5500-48G-PoE+ EI TAA (2 slots)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A5500-48G-PoE+ SI (2 slots)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Power consumption specifications for non-PoE switches

<table>
<thead>
<tr>
<th>Chassis</th>
<th>Minimum power consumption</th>
<th>Maximum power consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>A5500-24G EI (2 slots)</td>
<td>36 W</td>
<td>110 W</td>
</tr>
<tr>
<td>A5500-24G EI TAA (2 slots)</td>
<td>36 W</td>
<td>103 W</td>
</tr>
<tr>
<td>A5500-24G SI (2 slots)</td>
<td>36 W</td>
<td>103 W</td>
</tr>
<tr>
<td>A5500-24G-SFP EI TAA (2 slots)</td>
<td></td>
<td>115 W</td>
</tr>
<tr>
<td>A5500-48G EI (2 slots)</td>
<td>PSR150-A (JD362A): 44 W</td>
<td>PSR150-D (JD366A): 30 W</td>
</tr>
<tr>
<td>A5500-48G EI TAA (2 slots)</td>
<td>63 W</td>
<td>155 W</td>
</tr>
<tr>
<td>A5500-48G SI (2 slots)</td>
<td>55 W</td>
<td>145 W</td>
</tr>
</tbody>
</table>

## Power consumption specifications for PoE switches

<table>
<thead>
<tr>
<th>Chassis</th>
<th>Maximum PoE power per port</th>
<th>Total PoE output</th>
<th>Minimum power consumption</th>
<th>Maximum power consumption (including total PoE output)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A5500-24G-PoE+ EI (2 slots)</td>
<td>30 W</td>
<td>370 W</td>
<td>60 W</td>
<td>591 W at AC input</td>
</tr>
<tr>
<td>A5500-24G-PoE+ EI TAA (2 slots)</td>
<td>30 W</td>
<td>370 W</td>
<td>60 W</td>
<td>492 W at RPS DC input</td>
</tr>
<tr>
<td>A5500-24G-PoE+ SI (2 slots)</td>
<td>30 W</td>
<td>370 W</td>
<td>62 W</td>
<td>585 W at AC input</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>491 W at RPS DC input</td>
</tr>
<tr>
<td>Chassis</td>
<td>Maximum PoE power per port</td>
<td>Total PoE output</td>
<td>Minimum power consumption</td>
<td>Maximum power consumption (including total PoE output)</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>----------------------------</td>
<td>------------------------------------------------------</td>
<td>---------------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>A5500-48G-PoE+ EI (2 slots)</td>
<td>30 W</td>
<td>370 W at AC input</td>
<td>85 W</td>
<td>661 W at AC input</td>
</tr>
<tr>
<td>A5500-48G-PoE+ EI TAA (2 slots)</td>
<td></td>
<td>740 W at RPS DC input (370 W for ports 1 to 24, and 370 W for ports 25 to 48)</td>
<td></td>
<td>930 W at RPS DC input</td>
</tr>
<tr>
<td>A5500-48G-PoE+ SI (2 slots)</td>
<td>30 W</td>
<td>370 W at AC input</td>
<td>90 W</td>
<td>651 W at AC input</td>
</tr>
<tr>
<td></td>
<td></td>
<td>740 W at RPS DC input (370 W for ports 1 to 24, and 370 W for ports 25 to 48)</td>
<td></td>
<td>921 W at RPS DC input</td>
</tr>
</tbody>
</table>

**Cooling system**

All A5500 EI and A5500 SI switches use fixed fans for heat dissipation, and the airflow is from left to right.

<table>
<thead>
<tr>
<th>Chassis</th>
<th>Fixed fans</th>
</tr>
</thead>
<tbody>
<tr>
<td>A5500-24G EI (2 slots)</td>
<td>4</td>
</tr>
<tr>
<td>A5500-24G EI TAA (2 slots)</td>
<td></td>
</tr>
<tr>
<td>A5500-24G SI (2 slots)</td>
<td></td>
</tr>
<tr>
<td>A5500-48G EI (2 slots)</td>
<td></td>
</tr>
<tr>
<td>A5500-48G EI TAA (2 slots)</td>
<td></td>
</tr>
<tr>
<td>A5500-48G SI (2 slots)</td>
<td></td>
</tr>
<tr>
<td>A5500-24G-PoE+ EI (2 slots)</td>
<td>6</td>
</tr>
<tr>
<td>A5500-24G-PoE+ EI TAA (2 slots)</td>
<td></td>
</tr>
<tr>
<td>A5500-24G-PoE+ SI (2 slots)</td>
<td></td>
</tr>
<tr>
<td>A5500-48G-PoE+ EI (2 slots)</td>
<td></td>
</tr>
<tr>
<td>A5500-48G-PoE+ EI TAA (2 slots)</td>
<td></td>
</tr>
<tr>
<td>A5500-48G-PoE+ SI (2 slots)</td>
<td></td>
</tr>
<tr>
<td>A5500-24G-SFP EI (2 slots)</td>
<td>6 (4 for the system, and 1 for each power supply)</td>
</tr>
</tbody>
</table>
Appendix B FRUs and compatibility matrixes

This appendix describes the FRUs available for the A5500 EI and A5500 SI switches and their compatibility.

Hot swappable power supplies

This section applies to the A5500-24G-SFP EI (2 slots) and A5500-24G-SFP EI TAA (2 slots) switches.

<table>
<thead>
<tr>
<th>Power supply</th>
<th>Specifications</th>
</tr>
</thead>
</table>
| PSR150-A (JD362A) | • Rated input voltage range: 100 VAC to 240 VAC; 50 Hz or 60 Hz  
| | • Max input voltage range: 90 VAC to 264 VAC; 47 Hz to 63 Hz  
| | • Output voltage: 12 V  
| | • Max output current: 12.5 A  
| | • Max output power: 150 W  

| PSR150-D (JD366A) | • Rated input voltage range: –48 VDC to –60 VDC  
| | • Max input voltage range: –36 VDC to –72 VDC  
| | • Output voltage: 12 V  
| | • Max output current: 12.5 A  
| | • Max output power: 150 W  

NOTE:

- The A5500-24G-SFP EI (2 slots) and A5500-24G-SFP EI TAA (2 slots) switches support the mix of a PSR150-A (JD362A) and a PSR150-D (JD366A) power supply.
- For more information about the power supplies, see the HP PSR150-A & PSR150-D Power Supplies User Guide.
## Interface cards

The interface cards in this section are available for all A5500 EI and A5500 SI switches.

<table>
<thead>
<tr>
<th>Card model</th>
<th>Product code</th>
<th>Description</th>
<th>Support for IRF</th>
<th>Compatible transceiver modules/cables</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSPM2GP2P</td>
<td>JD367A</td>
<td>Provides two Gbps SFP fiber ports</td>
<td>No</td>
<td>See “GE SFP transceiver modules.”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>NOTE:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>This card does not support the</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>transceiver module coded JD089B.</td>
</tr>
<tr>
<td>LSPM2SP2P</td>
<td>JD368B</td>
<td>Provides two 10 Gbps SFP+ fiber ports</td>
<td>Yes</td>
<td>See “10-GE SFP+ transceiver modules” and “SFP+ cables.”</td>
</tr>
<tr>
<td>LSPM1XP2P</td>
<td>JD359B</td>
<td>Provides two 10 Gbps XFP fiber ports</td>
<td>Yes</td>
<td>See “10-GE XFP transceiver modules.”</td>
</tr>
<tr>
<td>LSPM1XP1P</td>
<td>JD361B</td>
<td>Provides one 10 Gbps XFP fiber port</td>
<td>Yes</td>
<td>See “10-GE XFP transceiver modules.”</td>
</tr>
<tr>
<td>LSPM1CX2P</td>
<td>JD360B</td>
<td>Provides two 10 Gbps copper ports</td>
<td>Yes</td>
<td>See “CX4 cables.”</td>
</tr>
</tbody>
</table>

NOTE:
For more information about the interface cards, see the user guides for the interface cards.

## SFP/SFP+/XFP transceiver modules and SFP+/CX4 cables

NOTE:
- To guarantee the functionality of the SFP/SFP+/XFP ports, use only HP transceiver modules.
- The transceiver modules available for this switch series are subject to change over time. For the most up-to-date list of transceiver modules, consult HP.
- For the transceiver module specifications, see HP A-Series Switches Transceiver Modules User Guide. For information about installing a transceiver module, see SFP/SFP+/XFP Transceiver Modules Installation Guide.
## GE SFP transceiver modules

<table>
<thead>
<tr>
<th>Product code</th>
<th>Module description</th>
<th>Central wavelength (nm)</th>
<th>Cable/fiber diameter (μm)</th>
<th>Multimode fiber modal bandwidth (MHz × km)</th>
<th>Max transmission distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>JD118B</td>
<td>HP X120 1G SFP LC SX Transceiver</td>
<td>850</td>
<td>50/125</td>
<td>500</td>
<td>550 m (1804.46 ft)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>400</td>
<td>500 m (1640.42 ft)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>200</td>
<td>275 m (902.23 ft)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>160</td>
<td>220 m (721.78 ft)</td>
</tr>
<tr>
<td>JD119B</td>
<td>HP X120 1G SFP LC LX Transceiver</td>
<td>1310</td>
<td>9/125</td>
<td>N/A</td>
<td>10 km (6.21 miles)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>50/125</td>
<td>550 m (1804.46 ft)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>500, 400</td>
<td>550 m (1804.46 ft)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>62.5/125</td>
<td>550 m (1804.46 ft)</td>
</tr>
<tr>
<td>JD061A</td>
<td>HP X125 1G SFP LC LH40 1310nm Transceiver</td>
<td>1310</td>
<td>9/125</td>
<td>N/A</td>
<td>40 km (24.86 miles)</td>
</tr>
<tr>
<td>JD062A</td>
<td>HP X120 1G SFP LC LH40 1550nm Transceiver</td>
<td>1550</td>
<td>9/125</td>
<td>N/A</td>
<td>40 km (24.86 miles)</td>
</tr>
<tr>
<td>JD063B</td>
<td>HP X125 1G SFP LC LH70 Transceiver</td>
<td>1550</td>
<td>9/125</td>
<td>N/A</td>
<td>70 km (43.50 miles)</td>
</tr>
<tr>
<td>JD103A</td>
<td>HP X120 1G SFP LC LH100 Transceiver</td>
<td>1550</td>
<td>9/125</td>
<td>N/A</td>
<td>100 km (62.14 miles)</td>
</tr>
<tr>
<td>JD098B</td>
<td>HP X121 1G SFP LC BX 10-U Transceiver</td>
<td>TX: 1310nm RX: 1490nm</td>
<td>9/125</td>
<td>N/A</td>
<td>10 km (6.21 miles)</td>
</tr>
<tr>
<td>JD099B</td>
<td>HP X121 1G SFP LC BX 10-D Transceiver</td>
<td>TX: 1490nm RX: 1310nm</td>
<td>9/125</td>
<td>N/A</td>
<td>10 km (6.21 miles)</td>
</tr>
<tr>
<td>JD089B</td>
<td>HP X121 1G SFP RJ45 T Transceiver</td>
<td>N/A</td>
<td>Category-5 twisted pair</td>
<td>N/A</td>
<td>100 m (328.08 ft)</td>
</tr>
</tbody>
</table>

**IMPORTANT:**

You must use the transceiver modules coded JD098B and JD099B in pairs.
### FE SFP transceiver modules

<table>
<thead>
<tr>
<th>Product code</th>
<th>Module Description</th>
<th>Central wavelength (nm)</th>
<th>Fiber diameter (μm)</th>
<th>Maximum transmission distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>JD102B</td>
<td>HP X110 100M SFP LC FX Transceiver</td>
<td>1310</td>
<td>50/125</td>
<td>2 km (1.24 miles)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>62.5/125</td>
<td></td>
</tr>
<tr>
<td>JD120B</td>
<td>HP X110 100M SFP LC LX Transceiver</td>
<td>1310</td>
<td>9/125</td>
<td>15 km (9.32 miles)</td>
</tr>
<tr>
<td>JD090A</td>
<td>HP X110 100M SFP LC LH40 Transceiver</td>
<td>1310</td>
<td>9/125</td>
<td>40 km (24.86 miles)</td>
</tr>
<tr>
<td>JD091A</td>
<td>HP X110 100M SFP LC LH80 Transceiver</td>
<td>1550</td>
<td>9/125</td>
<td>80 km (49.71 miles)</td>
</tr>
<tr>
<td>JD100A</td>
<td>HP X115 100M SFP BX 10-U Transceiver</td>
<td>TX: 1310 nm RX: 1550 nm</td>
<td>9/125</td>
<td>15 km (9.32 miles)</td>
</tr>
<tr>
<td>JD101A</td>
<td>HP X115 100M SFP BX 10-D Transceiver</td>
<td>TX: 1550 RX: 1310</td>
<td>9/125</td>
<td>15 km (9.32 miles)</td>
</tr>
</tbody>
</table>

**IMPORTANT:**
You must use the transceiver modules coded JD100A and JD101A in pairs.

### 10-GE SFP+ transceiver modules

<table>
<thead>
<tr>
<th>Product code</th>
<th>Module description</th>
<th>Central wavelength (nm)</th>
<th>Fiber diameter (μm)</th>
<th>Multimode fiber modal bandwidth (MHz × km)</th>
<th>Max transmission distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>JD092B</td>
<td>HP X130 10G SFP+ LC SR Transceiver</td>
<td>850</td>
<td>50/125</td>
<td>2000</td>
<td>300 m (984.25 ft)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>500</td>
<td>82 m (269.03 ft)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>400</td>
<td>66 m (216.54 ft)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>62.5/125</td>
<td>33 m (108.27 ft)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>160</td>
<td>26 m (85.3 ft.)</td>
</tr>
<tr>
<td>JD093B</td>
<td>HP X130 10G SFP+ LC LRM Transceiver</td>
<td>1310</td>
<td>50/125</td>
<td>1500, 500</td>
<td>220 m (721.78 ft)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>400</td>
<td>100 m (328.08 ft)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>62.5/125</td>
<td>220 m (721.78 ft)</td>
</tr>
</tbody>
</table>
### SFP+ cabling

<table>
<thead>
<tr>
<th>Product code</th>
<th>Module description</th>
<th>Central wavelength (nm)</th>
<th>Fiber diameter (μm)</th>
<th>Multimode fiber modal bandwidth (MHz × km)</th>
<th>Max transmission distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>JD094B</td>
<td>HP X130 10G SFP+ LC LR Transceiver</td>
<td>1310</td>
<td>9/125</td>
<td>N/A</td>
<td>10 km (6.21 miles)</td>
</tr>
<tr>
<td>JG234A</td>
<td>HP X130 10G SFP+ LC ER Transceiver</td>
<td>1550</td>
<td>9/125</td>
<td>N/A</td>
<td>40 km (24.86 miles)</td>
</tr>
</tbody>
</table>

**NOTE:**

For the SFP+ cables available for connecting the SFP+ ports, see “SFP+ cables.”

#### SFP+ cables

<table>
<thead>
<tr>
<th>Product code</th>
<th>Cable description</th>
<th>Cable length</th>
</tr>
</thead>
<tbody>
<tr>
<td>JD095B</td>
<td>HP X240 10G SFP+ SFP+ 0.65m DA Cable</td>
<td>0.65 m (2.13 ft)</td>
</tr>
<tr>
<td>JD096B</td>
<td>HP X240 10G SFP+ SFP+ 1.2m DA Cable</td>
<td>1.2 m (3.94 ft)</td>
</tr>
<tr>
<td>JD097B</td>
<td>HP X240 10G SFP+ SFP+ 3m DA Cable</td>
<td>3 m (9.84 ft)</td>
</tr>
<tr>
<td>JG081B</td>
<td>HP X240 10G SFP+ SFP+ 5m DA Cable</td>
<td>5 m (16.40 ft)</td>
</tr>
</tbody>
</table>

Figure 47 SFP+ cable

![SFP+ cable diagram](image)

(1) Pull latch   (2) Connector
## 10-GE XFP transceiver modules

<table>
<thead>
<tr>
<th>Product code</th>
<th>Module description</th>
<th>Central wavelength (nm)</th>
<th>Fiber diameter (μm)</th>
<th>Multimode fiber modal bandwidth (MHz × km)</th>
<th>Max transmission distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>JD117B</td>
<td>HP X130 10G XFP LC SR Transceiver</td>
<td>850</td>
<td>50/125</td>
<td>2000</td>
<td>300 m (984.25 ft)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>500</td>
<td>82 m (269.03 ft)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>400</td>
<td>66 m (216.54 ft)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>62.5/125</td>
<td>220</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>33 m (108.27 ft)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>160</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>26 m (85.3 ft)</td>
</tr>
<tr>
<td>JD108B</td>
<td>HP X130 10G XFP LC LR Transceiver</td>
<td>1310</td>
<td>9/125</td>
<td>N/A</td>
<td>10 km (6.21 miles)</td>
</tr>
<tr>
<td>JD121A</td>
<td>HP X135 10G XFP LC ER Transceiver</td>
<td>1550</td>
<td>9/125</td>
<td>N/A</td>
<td>40 km (24.86 miles)</td>
</tr>
<tr>
<td>JD107A</td>
<td>HP X130 10G XFP LC ZR Transceiver</td>
<td>1550</td>
<td>9/125</td>
<td>N/A</td>
<td>80 km (49.71 miles)</td>
</tr>
</tbody>
</table>

## CX4 cables

<table>
<thead>
<tr>
<th>Product code</th>
<th>Cable description</th>
<th>Connector type</th>
<th>Cable length</th>
</tr>
</thead>
<tbody>
<tr>
<td>JD363B</td>
<td>HP X230 Local Connect 50cm CX4 Cable</td>
<td>4X Infiniband</td>
<td>0.5 m (19.69 in)</td>
</tr>
<tr>
<td>JD364B</td>
<td>HP X230 Local Connect 100cm CX4 Cable</td>
<td>4X Infiniband</td>
<td>1 m (39.37 in)</td>
</tr>
<tr>
<td>JD365A</td>
<td>HP X230 Local Connect CX4 300cm Cable</td>
<td>4X Infiniband</td>
<td>3 m (118.11 in)</td>
</tr>
</tbody>
</table>

![CX4 cable](image)

**Figure 48 CX4 cable**

1. Pull latch
2. Connector
Appendix C Ports and LEDs

Ports

Console port

All EI and SI switches have one console port on the front panel.

**Table 12 Console port specifications**

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connector type</td>
<td>RJ-45</td>
</tr>
<tr>
<td>Compliant standard</td>
<td>EIA/TIA-232</td>
</tr>
<tr>
<td>Transmission baud rate</td>
<td>9600 bps (default) to 115200 bps</td>
</tr>
<tr>
<td>Service</td>
<td>• Provides connection to an ASCII terminal.</td>
</tr>
<tr>
<td></td>
<td>• Provides connection to the serial port of a local or remote (through a pair of modems) PC running terminal emulation program.</td>
</tr>
</tbody>
</table>

10/100/1000Base-T Ethernet port

**Table 13 10/100/1000Base-T Ethernet port specifications**

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connector type</td>
<td>RJ-45</td>
</tr>
<tr>
<td>Interface standard</td>
<td>• 10 Mbps, half/full duplex</td>
</tr>
<tr>
<td></td>
<td>• 100 Mbps, half/full duplex</td>
</tr>
<tr>
<td></td>
<td>• 1000 Mbps, full duplex</td>
</tr>
<tr>
<td></td>
<td>• MDI/MDI-X, auto-sensing</td>
</tr>
<tr>
<td>Max transmission distance</td>
<td>100 m (328.08 ft)</td>
</tr>
<tr>
<td>Transmission medium</td>
<td>Category-5 (or above) twisted pair cable</td>
</tr>
<tr>
<td>Standards</td>
<td>IEEE 802.3i, 802.3u, 802.3ab</td>
</tr>
</tbody>
</table>

SFP port

All EI and SI switches have SFP ports.

- For the SFP transceiver modules available for the A5500 EI switches, see “GE SFP transceiver modules” and “FE SFP transceiver modules.”
- For the SFP transceiver modules available for the A5500 SI switches, see “GE SFP transceiver modules.”
**Combo interface**

- On the A5500-24G-SFP EI (2 slots) and A5500-24G-SFP EI TAA (2 slots) switch, the last eight SFP ports and the eight 10/100/1000Base-T Ethernet ports are copper/fiber combo ports in pairs, as shown in Table 14. They form eight combo interfaces.

- On all the other A5500 EI and A5500 SI switches, the last four 10/100/1000Base-T Ethernet ports and the four SFP ports are copper/fiber combo ports in pairs, as shown in Table 14. They form four combo interfaces.

When one port in a pair is activated, the other port automatically shuts down. For more information about combo interfaces, see *HP A5500 EI & A5500 SI Switch Series Configuration Guides*.

**Table 14 Copper/fiber combo ports in pairs**

<table>
<thead>
<tr>
<th>Chassis</th>
<th>SFP port</th>
<th>10/100/1000Base-T Ethernet port</th>
</tr>
</thead>
<tbody>
<tr>
<td>A5500-24G EI (2 slots)</td>
<td>GigabitEthernet 1/0/25</td>
<td>GigabitEthernet 1/0/22</td>
</tr>
<tr>
<td>A5500-24G EI TAA (2 slots)</td>
<td>GigabitEthernet 1/0/26</td>
<td>GigabitEthernet 1/0/24</td>
</tr>
<tr>
<td>A5500-24G-PoE+ EI (2 slots)</td>
<td>GigabitEthernet 1/0/27</td>
<td>GigabitEthernet 1/0/21</td>
</tr>
<tr>
<td>A5500-24G-PoE+ EI TAA (2 slots)</td>
<td>GigabitEthernet 1/0/28</td>
<td>GigabitEthernet 1/0/23</td>
</tr>
<tr>
<td>A5500-24G SI (2 slots)</td>
<td>GigabitEthernet 1/0/49</td>
<td>GigabitEthernet 1/0/46</td>
</tr>
<tr>
<td>A5500-24G-PoE+ SI (2 slots)</td>
<td>GigabitEthernet 1/0/50</td>
<td>GigabitEthernet 1/0/48</td>
</tr>
<tr>
<td>A5500-48G EI (2 slots)</td>
<td>GigabitEthernet 1/0/51</td>
<td>GigabitEthernet 1/0/45</td>
</tr>
<tr>
<td>A5500-48G EI TAA (2 slots)</td>
<td>GigabitEthernet 1/0/52</td>
<td>GigabitEthernet 1/0/47</td>
</tr>
<tr>
<td>A5500-48G-PoE+ EI (2 slots)</td>
<td>GigabitEthernet 1/0/17</td>
<td>GigabitEthernet 1/0/25</td>
</tr>
<tr>
<td>A5500-48G-PoE+ SI (2 slots)</td>
<td>GigabitEthernet 1/0/18</td>
<td>GigabitEthernet 1/0/26</td>
</tr>
<tr>
<td>A5500-24G-SFP EI (2 slots)</td>
<td>GigabitEthernet 1/0/19</td>
<td>GigabitEthernet 1/0/27</td>
</tr>
<tr>
<td>A5500-24G-SFP EI TAA (2 slots)</td>
<td>GigabitEthernet 1/0/20</td>
<td>GigabitEthernet 1/0/28</td>
</tr>
<tr>
<td></td>
<td>GigabitEthernet 1/0/21</td>
<td>GigabitEthernet 1/0/29</td>
</tr>
<tr>
<td></td>
<td>GigabitEthernet 1/0/22</td>
<td>GigabitEthernet 1/0/30</td>
</tr>
<tr>
<td></td>
<td>GigabitEthernet 1/0/23</td>
<td>GigabitEthernet 1/0/31</td>
</tr>
<tr>
<td></td>
<td>GigabitEthernet 1/0/24</td>
<td>GigabitEthernet 1/0/32</td>
</tr>
</tbody>
</table>
## LEDs

### Table 15 LEDs at a glance

<table>
<thead>
<tr>
<th>LED</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>System status LED</td>
<td>Entire series</td>
</tr>
<tr>
<td>Power supply status LEDs</td>
<td>A5500-24G-SFP EI (2 slots)</td>
</tr>
<tr>
<td></td>
<td>A5500-24G-SFP EI TAA (2 slots)</td>
</tr>
<tr>
<td>RPS status LED</td>
<td>Entire series (except the A5500-24G-SFP EI (2 slots) and A5500-24G-SFP EI TAA (2 slots) )</td>
</tr>
<tr>
<td>Port mode LED</td>
<td>Entire series</td>
</tr>
<tr>
<td>Seven-segment LED</td>
<td>Entire series</td>
</tr>
<tr>
<td>10/100/1000Base-T Ethernet port LED</td>
<td>Entire series</td>
</tr>
<tr>
<td>SFP port status LED</td>
<td>Entire series</td>
</tr>
<tr>
<td>Interface card status LED</td>
<td>Entire series</td>
</tr>
</tbody>
</table>

### System status LED

The system status LED shows the operating status of the switch.

### Table 16 System status LED description

<table>
<thead>
<tr>
<th>LED mark</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYS/PWR</td>
<td>Steady green</td>
<td>The switch is operating properly.</td>
</tr>
<tr>
<td></td>
<td>Flashing green (1 Hz)</td>
<td>The switch is performing power-on self test (POST).</td>
</tr>
<tr>
<td></td>
<td>Steady red</td>
<td>POST has failed.</td>
</tr>
<tr>
<td></td>
<td>Flashing yellow (1 Hz)</td>
<td>Some ports have failed to pass POST.</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>The switch is powered off.</td>
</tr>
</tbody>
</table>
Power supply status LEDs

Only the A5500-24G-SFP EI (2 slots) and A5500-24G-SFP EI TAA (2 slots) switches have power supply status LEDs to show the operating status of the power supplies in the power supply slots.

**Table 17 Hot swappable power supply status LED description**

<table>
<thead>
<tr>
<th>LED</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWR1</td>
<td>Steady green</td>
<td>A power supply is installed in the power supply slot, and the power output is normal.</td>
</tr>
<tr>
<td>PWR2</td>
<td>Steady yellow</td>
<td>A power supply is installed in the power supply slot, but the power supply is experiencing an output error or is not powered on.</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>No power supply is installed in the power supply slot.</td>
</tr>
</tbody>
</table>

RPS status LED

The RPS status LED shows the operating status of the RPS DC input.

The A5500-24G-SFP EI (2 slots) and A5500-24G-SFP EI TAA (2 slots) switches do not have an RPS status LED.

**Table 18 RPS status LED description for the non-PoE switches**

<table>
<thead>
<tr>
<th>LED mark</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPS</td>
<td>Steady green</td>
<td>Both the RPS DC input and the AC input are normal, or an RPS is connected and the AC input is normal.</td>
</tr>
<tr>
<td>RPS</td>
<td>Steady yellow</td>
<td>The RPS DC input is normal, but the AC input is disconnected or has failed.</td>
</tr>
<tr>
<td>RPS</td>
<td>Off</td>
<td>No RPS is connected.</td>
</tr>
</tbody>
</table>

**Table 19 RPS status LED description for the PoE switches**

<table>
<thead>
<tr>
<th>LED mark</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPS</td>
<td>Steady green</td>
<td>Both the RPS DC input and the AC input are normal.</td>
</tr>
<tr>
<td>RPS</td>
<td>Steady yellow</td>
<td>The RPS power input is normal, but the AC input is disconnected or has failed.</td>
</tr>
<tr>
<td>RPS</td>
<td>Off</td>
<td>The RPS power input is abnormal or no RPS is connected.</td>
</tr>
</tbody>
</table>
Port mode LED

The port mode LED indicates the type of information that the network port LEDs are showing. You can use the port LED mode switching button to change the type of displayed port information.

Table 20 Port mode LED description

<table>
<thead>
<tr>
<th>LED mark</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Steady green</td>
<td>The network port LEDs are showing port rates.</td>
</tr>
<tr>
<td>Mode</td>
<td>Flashing green (1 Hz) (available only for the PoE+ switch models)</td>
<td>The network port LEDs are showing the status of PoE power supply on the ports.</td>
</tr>
<tr>
<td></td>
<td>Steady yellow</td>
<td>The network port LEDs are showing duplex modes.</td>
</tr>
</tbody>
</table>

Seven-segment LED

The seven-segment LED, together with the system status LED, shows detailed system operating information (see Table 21).

The seven-segment LED can also show the total PoE output power as a percentage of the maximum PoE output power that a PoE switch can supply (see Table 22). The PoE switches include A5500-24G-PoE+ EI (2 slots), A5500-24G-PoE+ EI TAA (2 slots), A5500-24G-PoE+ SI (2 slots), A5500-48G-PoE+ EI (2 slots), A5500-48G-PoE+ EI TAA (2 slots), and A5500-48G-PoE+ SI (2 slots).

Table 21 Seven-segment LED description (I)

<table>
<thead>
<tr>
<th>System status LED (PWR/SYS) status</th>
<th>Seven-segment LED (Unit) status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flashing green</td>
<td>The LED displays numbers one by one. 123456789</td>
<td>POST is running, and the LED displays the ongoing test item ID.</td>
</tr>
<tr>
<td>Flashing red</td>
<td>The LED displays flashing numbers. 123456789</td>
<td>POST has failed, and the LED flashes the ID of the failed test item.</td>
</tr>
<tr>
<td>Flashing green</td>
<td>A bar rotates clockwise around the LED.</td>
<td>Software is loading.</td>
</tr>
<tr>
<td>Steady red</td>
<td>The LED displays a flashing F character.</td>
<td>The switch is experiencing a fan failure.</td>
</tr>
<tr>
<td>Steady red</td>
<td>The LED displays a flashing t character.</td>
<td>The switch is in an over-temperature condition.</td>
</tr>
</tbody>
</table>
System status LED (PWR/SYS) status | Seven-segment LED (Unit) status | Description
--- | --- | ---
Steady green | The LED displays a capital C character. | The switch is the command switch in a cluster.
| The LED displays an S character. | The switch is a member switch in a cluster.
| The LED displays a lowercase c character. | The switch is a candidate switch for a cluster.
| The LED displays a number. | The member ID of the switch in an IRF fabric.

**Table 22 Seven-segment LED description (II)**

<table>
<thead>
<tr>
<th>Port mode LED (Mode) status</th>
<th>System status LED (PWR) status</th>
<th>Seven-segment LED (Unit) status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steady green</td>
<td>Steady green</td>
<td>The LED displays different signs.</td>
<td>For example, the sign indicates that the switch is outputting 0 to 20% of the maximum PoE output power.</td>
</tr>
</tbody>
</table>

**10/100/1000Base-T Ethernet port LED**

Each 10/100/1000Base-T auto-sensing Ethernet port has a status LED to show port operating status and activities. The port mode LED indicates the type of information (for example, port rate or duplex mode) that the port LEDs are showing. You can use the port LED mode switching button to change the type of displayed port information.

**Table 23 10/100/1000Base-T auto-sensing Ethernet port LEDs description**

<table>
<thead>
<tr>
<th>Port mode LED (Mode) status</th>
<th>Port LED status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steady green</td>
<td>The port is operating at 1000 Mbps. The port status LED fast flashes when the port is sending or receiving data.</td>
<td></td>
</tr>
<tr>
<td>Steady green (rate mode)</td>
<td>Steady yellow</td>
<td>The port is operating at 10/100 Mbps. The port status LED fast flashes when the port is sending or receiving data.</td>
</tr>
<tr>
<td></td>
<td>Flashing yellow (3 Hz)</td>
<td>POST has failed on the port.</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>No link is present on the port.</td>
</tr>
<tr>
<td>Port mode LED (Mode) status</td>
<td>Port LED status</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>----------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Flashing green (1 Hz) (PoE mode, available only for PoE switches)</td>
<td>Steady green</td>
<td>PoE power supply is normal.</td>
</tr>
<tr>
<td></td>
<td>Flashing green (1 Hz)</td>
<td>The device attached to the port requires power higher than the maximum or currently available PoE output power on the port.</td>
</tr>
<tr>
<td></td>
<td>Steady yellow</td>
<td>The port is experiencing a PoE failure.</td>
</tr>
<tr>
<td></td>
<td>Steady yellow</td>
<td>The port is not supplying power, because the device attached to the port is not a powered device.</td>
</tr>
<tr>
<td></td>
<td>Flashing yellow (3 Hz)</td>
<td>POST has failed on the port.</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>The port is not supplying PoE power.</td>
</tr>
<tr>
<td>Steady yellow (duplex mode)</td>
<td>Steady green</td>
<td>The port is operating in full duplex mode. The port status LED fast flashes when the port is sending or receiving data.</td>
</tr>
<tr>
<td></td>
<td>Steady yellow</td>
<td>The port is operating in half duplex mode. The port status LED fast flashes when the port is sending or receiving data.</td>
</tr>
<tr>
<td></td>
<td>Flashing yellow (3 Hz)</td>
<td>POST has failed on the port.</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>No link is present on the port.</td>
</tr>
</tbody>
</table>

**SFP port status LED**

Each SFP port has a status LED to show port operating status and activities. The port mode LED indicates the type of information (for example, port rate or duplex mode) that the port LEDs are showing. You can use the port LED mode switching button to change the type of displayed port information.

**Table 24 SFP port LEDs description**

<table>
<thead>
<tr>
<th>Port mode LED (Mode) status</th>
<th>Port LED status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steady green (rate mode) or flashing green (1 Hz, PoE mode)</td>
<td>Steady green</td>
<td>The port is operating at 1000 Mbps. The port status LED fast flashes when the port is sending or receiving data.</td>
</tr>
<tr>
<td></td>
<td>Steady yellow (available only on the A5500 EI switches)</td>
<td>The port is operating at 100 Mbps. The port status LED fast flashes when the port is sending or receiving data.</td>
</tr>
<tr>
<td></td>
<td>Flashing yellow (3 Hz)</td>
<td>POST has failed on the port.</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>No link is present on the port.</td>
</tr>
<tr>
<td>Steady yellow (duplex mode)</td>
<td>Steady green</td>
<td>The port is operating in full duplex mode. The port status LED fast flashes when the port is sending or receiving data.</td>
</tr>
<tr>
<td></td>
<td>Flashing yellow (3 Hz)</td>
<td>POST has failed on the port.</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>No link is present on the port.</td>
</tr>
</tbody>
</table>
## Interface card status LED

<table>
<thead>
<tr>
<th>LED mark</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOD1</td>
<td>Green</td>
<td>The interface card is in position and operating properly.</td>
</tr>
<tr>
<td>MOD2</td>
<td>Flashing yellow</td>
<td>The switch does not support the interface card model, or the interface card has failed.</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>The expansion interface card slot is empty.</td>
</tr>
</tbody>
</table>
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