Edge corE AS7312-54X port 10 G 100G Fiber Ethernet Switch User Guide

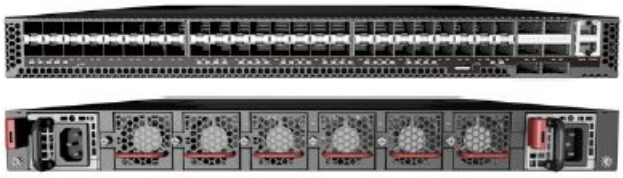
Contents

Edge corE AS7312-54X port 10 G 100G Fiber Ethernet Switch

54-Port 25G/100G Fiber Ethernet Switch
AS7312-54XS | AS7316-54XS

Unpack the Switch and Check Contents

AS7312-54XS or AS7316-54XS



Rack Mounting Kit-2 front-post brackets, 2 rear-post brackets, 20 screws, and 2 ear-locking screws
Power Cord (included with AC PSUs only)
Grounding Wire (included with DC PSUs only)
Console Cable-RJ-45 to DB-9
DC Power Connector (included with 48 VDC PSU only)
Dust Cover Kit-6 for QSFP port and 48 for SFP ports
Documentation-Quick Start Guide (this document) and Safety and Regulatory Information

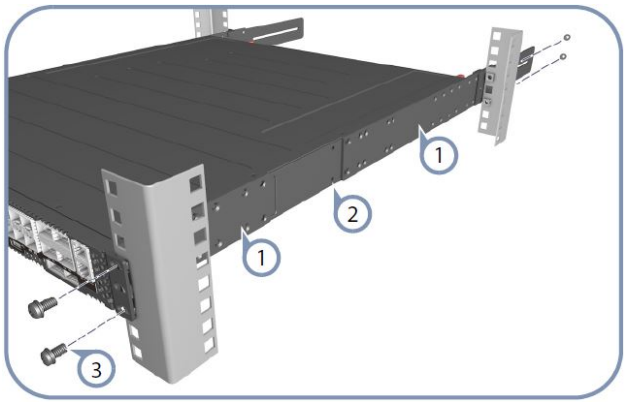
Warning: For a safe and reliable installation, use only the accessories and screws provided with the AS7312-54XS/AS7316-54XS. Use of other accessories and screws could result in damage to the unit. Any damages incurred by using unapproved accessories are not covered by the warranty.

Note: The switch has the Open Network Install Environment (ONIE) software installer pre-loaded on the switch, but no switch software image. Information about compatible switch software can be found at **www.edge-core.com**.

Caution: The switch includes plug-in power supply (PSU) and fan tray modules that are installed into its chassis. All installed modules must havea matching airflow direction.
That is, if the installed power modules have a front-to-back F2B) airflow direction, all the installed fan tray modules must also have a F2B airflow direction.

Note: The switch drawings in this document are for illustration only and may not match your particular switch model.

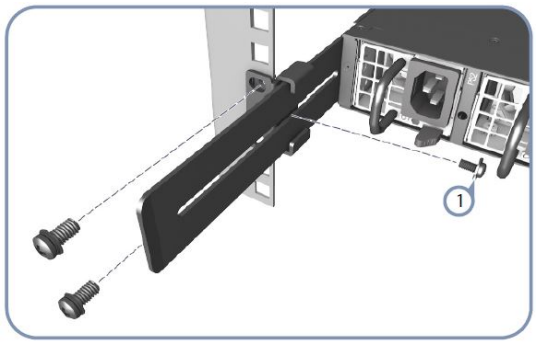
Attach the Brackets



1. Attach each of the front- and rear-post brackets to the switch using four of the included bracket screws.
2. Use an additional two screws to secure each of the rear-post brackets at the mid-point on the sides of the switch.
3. Use the screws and cage nuts supplied with the rack to secure the switch in the rack.

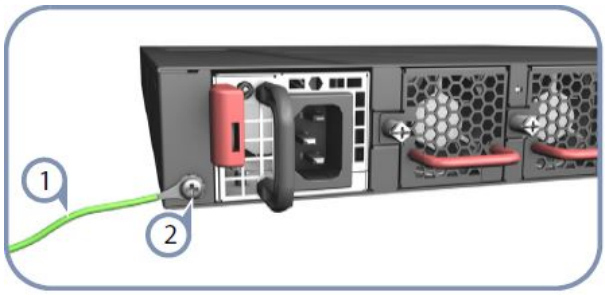
Caution: Installing the switch in a rack requires two people. One person should position the switch in the rack,while the other secures it using the rack screws.

Adjust Rear-Post Bracket Ears



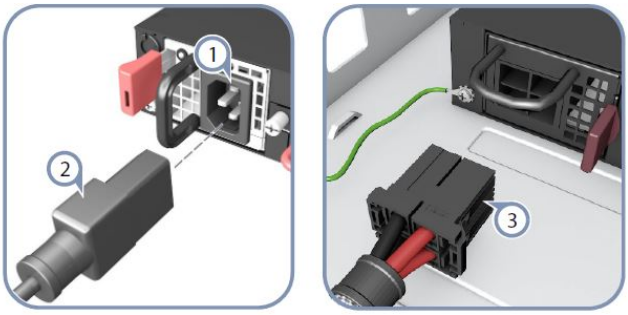
1. Lock the position of the rear-post bracket ears using the included position-locking screws.
   You can also adjust the rear-post bracket ears to fit different rack depths from 56 cm to 75 cm.

Ground the Switch



1. Ensure the rack is properly grounded and in compliance with ETSI ETS 300 253. Verify that there is a good electrical connection to the grounding point on the rack (no paint or isolating surtace treatment).
2. Attach the #14 AWG to the grounding point on the switch rear panel. Then connect the other end of the wire to rack ground. For details on grounding the switch with a 12 VDC PSU in an Open Rack, refer to the Edgecore ORSA-1U Open Rack Tray Set Installation Guide.
   Caution: The earth connection must not be removed unless all supply connections have been disconnected.

Connect Power

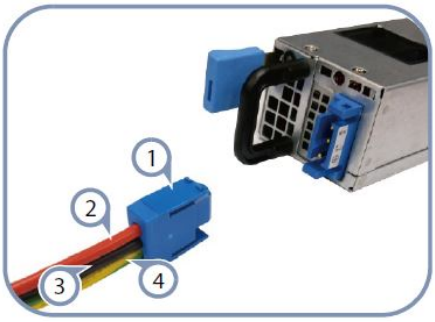


1. Install one or two AC or DC PSUs in the switch.
   The switch supports up to two PSUs that must have the same matching airflow direction as the installed fan

tray.

2. Connect an external AC or DC power source to the PsUs.
3. Connect the Open Rack tray connector to the 12 VDC PSU when the switch is installed in an Open Rack.

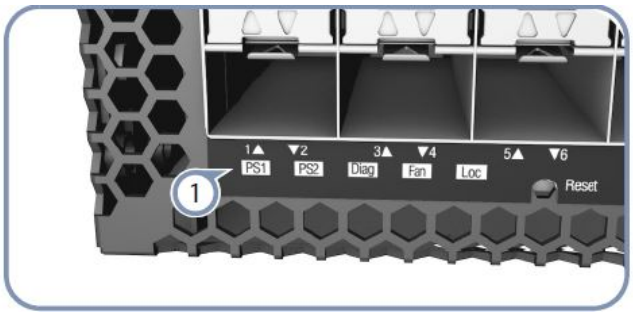
Caution: Use a UL/IEC/EN 60950-1 certified power supply to connect to a DC converter, and a #14 AWG (for-36 VDC to 72 VDC PsU) or #8 AWG (for 12 VDC PSU) wire to connect to a DC PSU.



1. Positronic PLA03F7000/AA Connector
2. DC Return
3. -36–72 VDC
4. Ground

Caution: Use a ULIEC/EN 60950-1 certified power supply to connect to a DC converter, and a #14 AWG (for 36-72VDC PSU).

Verify Switch Operation



1. Verify basic switch operation by checking the system LEDs.
   When operating normally, the PSU1/PSU2 and Fan LEDs should all be on green.

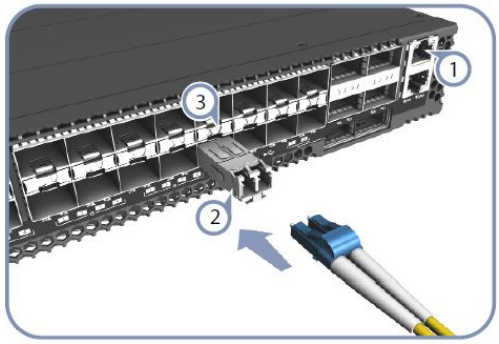
Perform Initial System Boot

1. If the network operating system (NOS) installer is located on a network server, first connect the RJ-45 Management (Mgmt) port to the network using 100-ohm Category 5, 5e or better twisted-pair cable. (Not required if the NOS installer is located on attached storage.)
2. Boot the switch. Wait for the ONIE software to locate and execute the NOS installer, and then wait for the installer to load the NOS software image.
   Subsequent switch boots will bypass ONIE and directly run the NOS software.

Note: For switches with ONIE software pre-loaded, refer to the network operating system (NOS) installer and

NOS documentation for details on software options and set up for ONIE.

Connect Network Cables



1. For the RJ-45 Management port, connect 100-ohm Category 5, 5e or better twisted-pair cable.
2. Connect DAC cables to the SFP28/QSFP28 slots. Or first install SFP28/QSFP28 transceivers and then connect fiber optic cabling to the transceiver ports.

   The following transceivers are supported:
   - 100GBASE-CR4, AOC, SR4, LR4, and PSM4
   - 40GBASE-CR4, SR4, and LR4
   - 25GBASE-CR4, AOC, and SR
   - 10GBASE-CR, SR, and LR
3. As connections are made, check the port status LEDs to be sure the links are valid.

   For the SFP28 ports:
   - Green25 Gbps mode
   - Amber10 Gbps mode

     Each QSFP28 port has four LEDs that indicate valid links in the following modes:
   - 1 LED Green 100 Gbps mode
   - 1 LED Blue-40 Gbps mode
   - 1-4 LEDs Amber- 25 Gbps breakout mode (four lanes)
   - 1-4 LEDs Purple- 10 Gbps breakout mode (four lanes)

Hardware Specifications

Switch Chassis

- **Size (WxDxH)** 438.4 x 473 x 44 mm (17.26 x 18.62 x 1.73 inches)
- **Weight** AS7312-54XS: 9.43 kg (20.78 lb), with two installed PSUs
  AS7316-54XS: 9.6 kg (21.164 lb), with two installed PSUs
- **Temperature Operating:** 0° C to 45° C (32° F to 123° F)
- **Storage:**-40° C to 70° C(-40° F to 158°
- **Humidity** Operating: 5% to 95% (non-condensing)
- **Power Consumption** AS7312-54XS: 584 W (maximum power Consumption)
  AS7316-54XS: 629 W (maximum power Consumption)

AC PSU

- **Power Rating** 100-240 VAC, 50-60 Hz, 650 Watts
- **AC Input** 100-240 VAC, 50-60 Hz, 10-5 A or 8.2-3.5 A or 7.8-3.8 A
- **DC Output** 5 VSB@ 4-2.5 A, 12 VDC @ 54 A-52.9 A

48 VDC PSU

- **Power Rating** 48 VDC, 650 Watts
- **DC Input** 36-72 VDC, 25-11A
- **DC Output** 5 VDC @ 4 A, 12 VDC@ 52.9 A

12 VDC PsU (PSU-12V-750)

- **DC Input** 12 VDC (from Open Rack busbar)

Regulatory Compliances

- **Emissions** EN 55032:2015+AC:2016, Class A
  EN 61000-3-2:2014, Class A
  EN 61000-3-3:2013
  CCC (GB9254-2008 (Class A))
  BSMI (CNS13438)
  FCC ClasS A
  VCCI Class A
  CE Mark
- **Immunity** EN 55024:2010+A1:2015
  IEC 61000-4-2/3/4/5/6/8/11
- **Safety** UL (CSA 22.2 No 60950-1 & UL60950-1)
  CB (IEC/EN60950-1)
  CCC (GB4943.1-2011)
  DCMLICNC11994 1.
- **Taiwan RoHS** CNS15663

Documents / Resources

	Edge corE AS7312-54X port 10 G 100G Fiber Ethernet Switch [pdf] User Guide AS7312-54X port 10 G 100G Fiber Ethernet Switch, AS7312-54X, port 10 G 100G Fiber Ethernet Switch, Fiber Ethernet Switch