

S6010-ON Installation Guide

January 2019

Notes, cautions, and warnings

 **NOTE:** A NOTE indicates important information that helps you make better use of your computer.

 **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

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About this guide

This guide provides site preparation recommendations, step-by-step procedures for rack mounting and desk mounting, inserting optional modules, and connecting to a power source.

⚠ **CAUTION:** To avoid electrostatic discharge (ESD) damage, wear grounding wrist straps when handling this equipment.

⚠ **WARNING:** Only trained and qualified personnel can install this equipment. Read this guide before you install and power up this equipment. This equipment contains two power cords. Disconnect both power cords before servicing.

⚠ **WARNING:** This equipment contains optical transceivers, which comply with the limits of Class 1 laser radiation.



Figure 1. Class 1, laser product label

⚠ **WARNING:** When no cable is connected, visible and invisible laser radiation may be emitted from the aperture of the optical transceiver ports. Avoid exposure to laser radiation and do not stare into open apertures.

Related documents

For more information about the S6010-ON system, see the following documents:

- *Dell Networking Release Notes for the S6010-ON System*
- *Dell Networking Configuration Guide for the S6010-ON System*
- *Dell Networking Command Line Reference Guide for the S6010-ON System*
- *Open Networking Hardware Diagnostic Guide for the S6010-ON System*

ⓘ **NOTE:** For the most recent documentation, visit Dell Support: www.dell.com/support.

S6010-ON System

The following sections describe the Dell S6010-ON system:

Topics:

- [Introduction](#)
- [Physical dimensions](#)
- [Luggage tag](#)
- [System status](#)
- [LED display](#)
- [Prerequisite](#)
- [S6010-ON Configurations](#)

Introduction

The Dell S6010-ON is a top-of-rack (ToR) switch/router product for copper connections to 10 Gbps servers and 40 Gbps optical uplinks to the 40 Gbps switching fabric in the core.

The S6010-ON offers the following features:

- Thirty-two fixed 40 Gbps QSFP+ ports
- One MicroUSB serial console port
- One universal serial bus (USB Type-A) port for additional file storage
- On-board Rangeley C2538/8GB DDR3 SDRAM central processing unit (CPU) system
- Temperature monitoring
- Software-readable thermal monitor
- Real time clock (RTC) support
- Two hot plug redundant power supplies
- Power management monitoring
- Five removable fans
- Standard 1U chassis

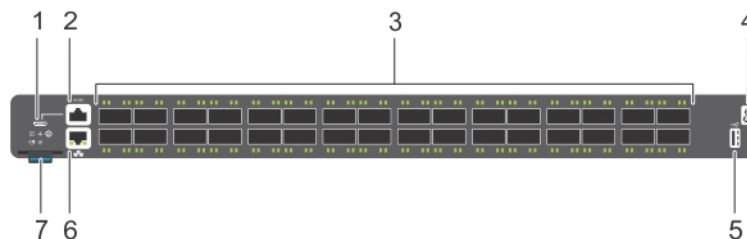


Figure 2. S6010-ON I/O-side view

- | | | | |
|---|--------------------------|---|----------------------------------|
| 1 | Micro USB-B console port | 2 | RS-232/RJ-45 serial console port |
|---|--------------------------|---|----------------------------------|

- 3 Thirty-two 40 Gbps QSFP+ ports
- 5 USB Type A storage
- 7 Luggage tag
- 4 Stack ID
- 6 10/100/1000BaseT Ethernet management port

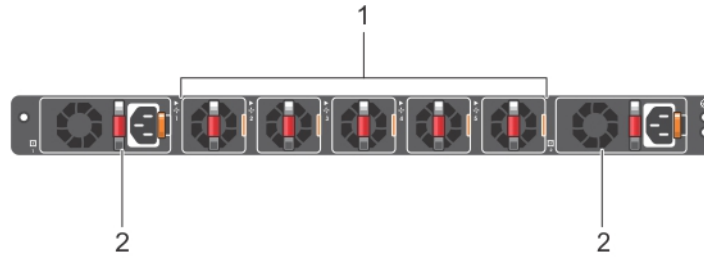


Figure 3. S6010-ON PSU-side view

- 1 Five fan modules
- 2 Power supply unit (PSU)

Physical dimensions

The S6010-ON has the following physical dimensions:

- 434 x 460 x 43.5 mm (W x D x H)
- 17.09 x 18.11 x 1.71 inches (W x D x H)

Luggage tag

The S6010-ON system has a pull-out tag, known as a luggage tag, on the I/O-side of the system.

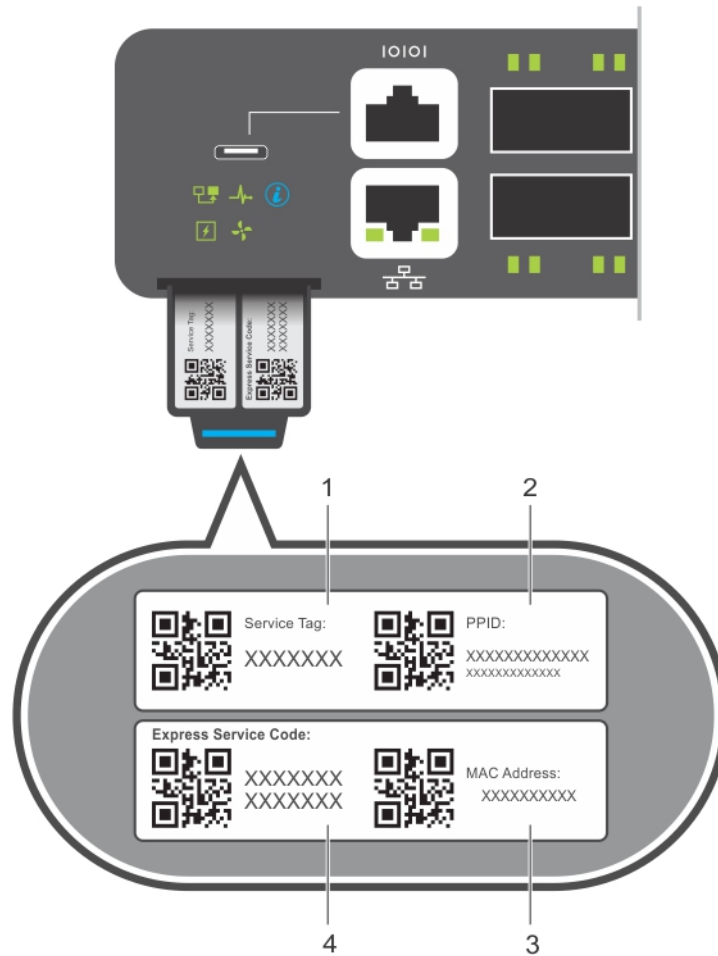


Figure 4. S6010-ON luggage tag

- | | | | |
|---|-------------|---|----------------------|
| 1 | Service tag | 2 | PPID |
| 3 | MAC address | 4 | Express service code |

System status

You can view system status information using the light emitting diodes (LEDs).

LED display

The S6010-ON includes LED displays on both the I/O and PSU side of the chassis, as shown.

For LED information, see your third-party operating software documentation.

LED behavior

The following system LED behavior is seen during open networking installation environment (ONIE) operations:

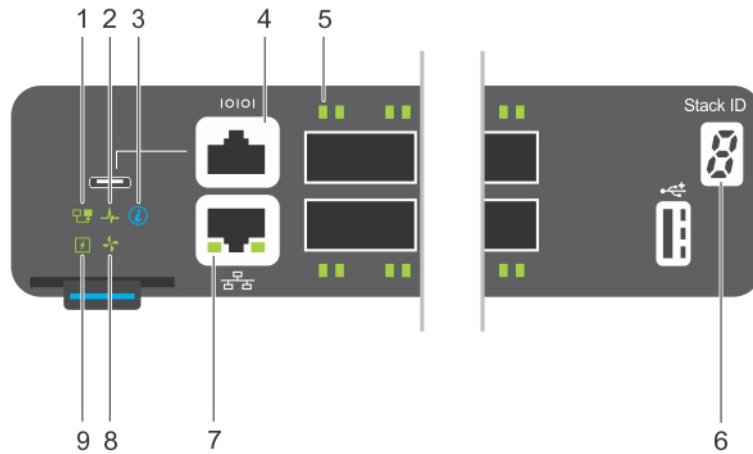


Figure 5. S6010-ON I/O side LEDs

- | | | | |
|---|--------------------------|---|--------------------------------------|
| 1 | Master LED | 2 | Status LED |
| 3 | Locator LED | 4 | RS-232/RJ-45 Serial Console Port LED |
| 5 | QSFP+ LEDs | 6 | Stack ID LED |
| 7 | Management Port Link LED | 8 | Fan LED |
| 9 | Power LED | | |

Table 1. S6010-ON I/O-side LED behavior

LED	Description
Master	<ul style="list-style-type: none"> Off—switch is in stacking slave mode Solid green—system is in stacking master or standalone mode
Status	<ul style="list-style-type: none"> Solid green—normal operation Blinking green—booting Solid amber—critical system error Blinking amber—noncritical system error—fan failure or power supply failure
Locator	<ul style="list-style-type: none"> Off—locator function is disabled Blinking blue—locator function is enabled
QSFP+ port when used as one 40G port. Only the first LED is used in 40G mode.	<ul style="list-style-type: none"> Off—No Link Solid green—link at 40G speed Blinking green—port activity at 40G speed Solid amber—link at speed lower than 40G Blinking amber—port activity at lower than 40G speed

LED	Description
	<ul style="list-style-type: none"> • Solid green—fan is operating normally • Solid amber—fan failure
PSU LED	<ul style="list-style-type: none"> • Off—no power to PSU/failure • Solid green—PSU is operating normally • Blinking green—PSU is turned off

Prerequisite

The following is a list of components you need to install the system:

NOTE: For more information, see [Site Preparations](#) and [Install the S6010-ON](#).

- S6010-ON chassis or multiple chassis, if stacking.
- AC or DC country/regional-specific cables to connect the AC or DC power source to each of the chassis' AC or DC power supplies.
- Dell ReadyRail™ mounting brackets for rack installation.
- Screws for rack installation.
- Grounding kit for chassis—GND lug, L-bracket, and screws

Items that are not included:

- GND lug and screws for rack
- Ground wire
- Crimping tool
- Anti-oxidant compound—Dell recommends NOALOX 4 or equivalent
- Thread-locker compound—Dell recommends Threadlocker Blue 242 or equivalent
- #1 and #2 Phillips screwdrivers
- Torx screwdriver
- Copper/fiber cables

Other optional components are:

- Extra fan module—recommended for redundancy
- Extra mounting brackets—if installing in a four-post rack or cabinet

S6010-ON Configurations

You can order the S6010-ON system in several different configurations. You can also order optional modules and optics separately.

You can order the following supported hardware components:

- S6010-ON AC or DC Normal Airflow: 32 fixed 40 Gbps QSFP+ ports, two AC power supply units and five fan subsystems. Airflow is from the I/O side to the PSU side.
- S6010-ON AC or DC Reverse Airflow: 32 fixed 40 Gbps QSFP+ ports, two AC power supply units and five fan subsystems. Airflow from the PSU side to the I/O side.
- Fan with airflow from the I/O side to the PSU side
- Fan with airflow from the PSU side to the I/O side
- AC or DC power supply with airflow from the I/O side to the PSU side
- AC or DC power supply with airflow from the PSU side to the I/O side

Site preparations

The S6010-ON is suitable for installation as part of a common bond network (CBN).

You can install the system in:

- Network telecommunication facilities.
- Data centers.
- Other locations where the National Electric Code (NEC) applies.

For more information about S6010-ON specifications, see [Specifications](#).

NOTE: Install the S6010-ON system into a rack or cabinet before installing any optional components.

Topics:

- [Site selection](#)
- [Cabinet placement](#)
- [Rack mounting](#)
- [S6010-ON ground](#)
- [Fans and airflow](#)
- [Power](#)
- [Storing components](#)

Site selection

Install Dell equipment in restricted access areas.

A restricted access area is one in which service personnel can only gain access using a special tool, lock, key or other means of security.

The authority responsible for the location, controls access.

CAUTION: Only trained and qualified personnel should install this equipment. Read this guide before installing and powering up the system.

WARNING: The following information is a condensed reference. Read the safety instructions in your Safety, Environmental, and Regulatory information booklet before you begin.

Verify that the area where you install your system, meets the following safety requirements:

- Near an adequate power source, with a power cord of appropriate length.
- Using your local electrical codes, connect the system to the appropriate branch circuit protection.
- Environmental temperature between 32° to 113°F (from 0° to 45°C). If the switch is in a closed or multiple rack assembly, the temperature might be higher than normal room temperature.
- The switch operating ambient temperature range is from 0° to 45°C (from 32° to 113°F).
- Relative humidity is from 5 to 90 percent noncondensing.
- Altitude at the installation site is below 10,000 feet.
- In a dry, clean, well-ventilated and temperature-controlled room, away from heat sources such as hot air ventilation outlets or direct sunlight.
- The switch is installed in an environment as free as possible from dust and foreign conductive material; such as, metal flakes from construction activities. Cooling mechanisms, such as fans and blowers in the switch, can draw dust and other particles causing contaminant buildup inside the chassis, which can result in system malfunction.

- Airflow around the switch and through the vents is unrestricted.
- Away from sources of severe electromagnetic noise. Cabling is away from sources of electrical noise, such as radios, power lines, and fluorescent lighting. Ensure that the cabling is safely away from other devices that might damage the cables. If needed, allow one rack unit (RU) space between devices to provide room for cabling.
- Positioned in a rack or cabinet, or on a desktop with adequate space in the front, back, and sides of the S6010-ON for proper ventilation and access.
- You have enough clearance to the I/O and PSU sides of the switch so you can read the light emitting diodes (LEDs).
- The switch is rack-mounted before you power it up.

Review these guidelines for rack mounting:

- Rack mounting—You may either place the switch on a rack shelf or mount the switch directly into a 19" wide, EIA-310-E- compliant rack.
- Rack loading—Overloading or uneven loading of racks may result in shelf or rack failure, damage to the equipment or personal injury. Before loading, stabilize the racks in a permanent location. Mount the components starting at the bottom of the rack, then work to the top. Do not exceed your rack load rating.
- Power considerations—Connect only to the power source specified on the unit. When you install multiple electrical components in a rack, ensure that the total component power ratings do not exceed the circuit capabilities. Overloaded power sources and extension cords present fire and shock hazards.
- Elevated ambient temperature—If you install the equipment in a closed rack assembly, the operating temperature of the rack environment may be greater than the room ambient temperature. The acceptable ambient temperature ranges are listed in [Specifications](#) under Environmental Parameters.
- Reduced air flow—Install the equipment in the rack so that you do not compromise the amount of airflow required for safe operation of the switch. For proper ventilation, position the chassis in an equipment rack or cabinet with a minimum of 5 inches (12.7 cm) of clearance around exhaust vents.
- Reverse air flow—To ensure cool air intake and to avoid hot air blow out from the I/O side, ensure that you have the necessary clearance.
- Reliable earthing—Maintain reliable earthing of rack-mounted equipment. Pay particular attention to the supply connections other than the direct connections to the branch circuit; for example, use of power strips.
- Do not mount the equipment with the PSU side facing in a downward position.

NOTE: Always handle the system and its components with care. Avoid dropping the chassis or its field replaceable units.

CAUTION: Always wear an electrostatic discharge (ESD) preventive wrist or heel ground strap when handling a system and its components. As with all electrical devices of this type, take all necessary safety precautions to prevent injury when installing this system. ESD damage can occur if components are mishandled.

Cabinet placement

Install the S6010-ON only in indoor cabinets designed for use in a controlled environment.

Do not install the S6010-ON in outside cabinets. For cabinet placement requirements, see [Site Selection](#).

The cabinet must meet minimum size requirements. Airflow must be in accordance with the Electronic Industries Alliance (EIA) standard. Ensure that there is a minimum of 5 inches (12.7 cm) between the intake and exhaust vents and the cabinet wall.

Rack mounting

When you prepare your equipment rack, ensure that the rack is grounded.

Ground the equipment rack to the same ground point the power service in your area uses. The ground path must be permanent.

S6010-ON ground

Use the S6010-ON in a common bond network (CBN).

Connect the grounding cables as described in [Installing the Ground Lug and Bracket Assembly](#) and [Completing the Ground Wire Installation](#).

Fans and airflow

The S6010-ON fans support two airflow options.

Fan combinations

Fans are installed as part of the factory install based on stock keeping unit (SKU) type. The system has SKUs that support the following configurations:

- AC or DC PSU with fan airflow from the I/O to the PSU
- AC or DC PSU with fan airflow from the PSU to the I/O

Be sure to order the fans suitable to support your site's ventilation. Use a single type of airflow fan in your system.

ⓘ | NOTE: Do not mix reverse and normal airflows in a single S6010-ON chassis.

For proper ventilation, position the system in an equipment rack (or cabinet) with a minimum of 5 inches (12.7 cm) of clearance around the exhaust vents. When you install two systems near each other, position the two chassis at least 5 inches (12.7 cm) apart to permit proper airflow. The fan speed increases when the internal temperature reaches 161.6°F (72°C) and decreases to normal speed when the temperature falls to 136.4°F (58°C). The S6010-ON never intentionally turns off the fans.

Power

To connect the chassis to the applicable power source, use the appropriate power cord.

- If the switch is an AC model, a country/region-specific AC power cord is included with the system.
- If the switch is a DC model, a country/region-specific DC power cord is included with the DC power kit.

When installing AC systems, follow the requirements of the National Electrical Code, ANSI/NFPA 70 where applicable.

The system is powered-up when the power cord is connected between the system and the power source.

⚠ | CAUTION: Always disconnect the power cable before you service the power supply slots.

⚠ | CAUTION: Use the power supply cord as the main disconnect device on the AC system. Ensure that the socket-outlet is located/installed near the equipment and is easily accessible.

Storing components

If you do not install your system and components immediately, properly store the system and all optional components following these guidelines:

- Storage location temperature must remain constant ranging from -40° to 158°F (from -40°C to 70°C)
- Store on a dry surface or floor, away from direct sunlight, heat, and air conditioning ducts
- Store in a dust-free environment

ⓘ | NOTE: ESD damage can occur when components are mishandled. Always wear an ESD-preventive wrist or heel ground strap when handling the S6010-ON and its accessories. After you remove the original packaging, place the S6010-ON and its components on an antistatic surface.

NEBS compliance

For your system to be network equipment building system (NEBS) compliant, you must follow the instructions detailed in this section. To be NEBS compliant, orient your system in the rack so that the air inlet is from the front aisle and the air exhaust is to the back aisle.

Important information

⚠ WARNING: The SFP+, QSFP, QSFP28, console, Ethernet management, and universal serial bus (USB) ports are suitable for connection to intrabuilding or unexposed wiring or cabling only. You **MUST NOT** metallicity connect the ports to interfaces that connect to the out side plant (OSP) or its wiring. Use these interfaces as intrabuilding interfaces only (Type-2 or Type-4 ports as described in GR-1089-CORE, Issue 6) and they require isolation from the exposed OSP cabling. Adding primary protectors is not sufficient protection to connect these interfaces metallicity to OSP wiring.

⚠ WARNING: If you install and connect the S6010-ON system to a commercial AC power source, you must connect the system to an external special protection device (SPD).

To be NEBs compliant:

- Locate your system in a restricted-access area where only trained personnel are allowed access.
- Install and connect your system to the common bonding network (CBN).
- You can also install and connect your system to the central office.
- Connect the battery returns of your system as DC-I.
- Ground your system using a copper ground conductor.
- Clean and coat all bare grounding connection points on your system with an antioxidant solution before making connections.
- Bring all unplated surfaces on your system to a bright finish and treat them with an antioxidant solution before making connections.
- To ensure electrical continuity, remove any nonconductive surfaces on your system from the threads and connection points.
- Use the two-hole, Listed, compression-type lug with an AWG 14 gauge wire for system grounding.

ⓘ NOTE: The S6010-ON can operate at -40.5 VDC to -60 VDC at a maximum current level of 15A.

ⓘ NOTE: The S6010-ON is Earthquake Z4-compliant when you attach the ReadyRails to the four-post frame using threaded hardware. Do not use the tool-less or two-post installation methods.

S6010–ON installation

To install the S6010–ON system, Dell recommends completing the installation procedures in the order presented in this guide.

Always handle the S6010–ON and its components with care. Avoid dropping the system or its field replaceable units (FRUs).

NOTE: ESD damage can occur if components are mishandled. Always wear an ESD-preventive wrist or heel ground strap when handling the S6010–ON and its components. As with all electrical devices of this type, take all the necessary safety precautions to prevent injury when installing this system.

Topics:

- [Unpack the S6010–ON system](#)
- [Ground lug and bracket installation](#)
- [Install the Dell ReadyRails System](#)
- [1U two-post installation](#)
- [Ground wire installation](#)
- [SFP+ and QSFP+ optic installation](#)
- [System power-up](#)
- [Before you install an OS](#)

Unpack the S6010–ON system

NOTE: Before unpacking the system, inspect the container and immediately report any evidence of damage.

When unpacking the system, make sure that the following items are included:

- One S6010–ON switch
- One RJ-45 to DB-9 female cable
- Two sets of rail kits, no tools required
- Two PSUs
- At least one country/region-specific AC power cord
- *S6010–ON Getting Started Guide*
- *Safety and Regulatory Information*
- *Warranty and Support Information*

Unpacking steps

- 1 Place the container on a clean, flat surface and cut all straps securing the container.
- 2 Open the container or remove the container top.
- 3 Remove the switch from the container and place it on a secure and clean surface.
- 4 Remove all packing material.
- 5 Inspect the product and accessories for damage.

Ground lug and bracket installation

Install the ground (GND) lug and bracket assembly, with a ground wire attached, before you install the system in a rack.

Dell supplies a kit with the following:

- One 2-hole UL-certified GND lug
- L-bracket
- Two flat head screws to attach lug to bracket
- Two pan head screws to attach assembly to chassis

You supply the following:

- A wire that complies with your local electrical codes in size and color. Typically the wire is 14 AWG, colored green or green with a yellow stripe.
- An anti-oxidant compound—Dell recommends NOALOX 4 or equivalent
- A crimping tool
- A thread-locker compound—Dell recommends Threadlocker Blue 242 or equivalent

- 1 Attach the end of the ground wire to the GND lug:
 - a Coat the bare end of the wire with an anti-oxidant compound.
 - b Insert the end of the wire into the lug.
 - c To secure the connection of wire to lug, crimp the lug end.

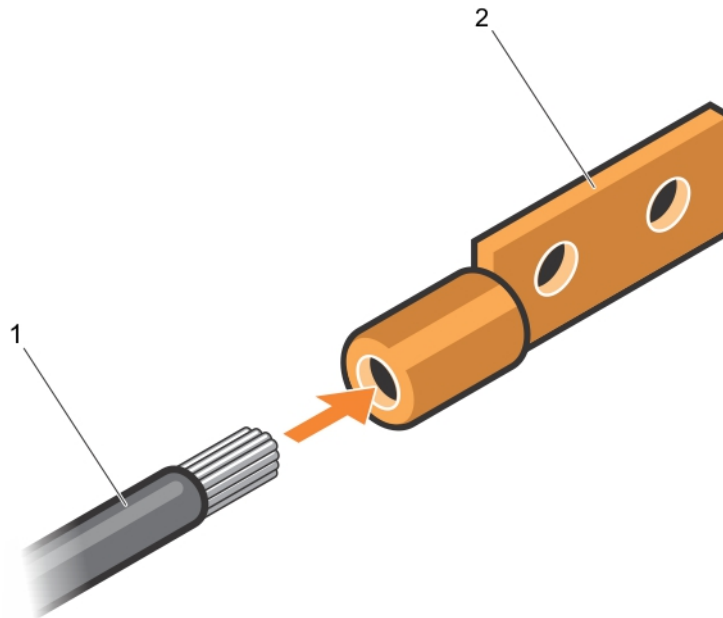


Figure 7. Ground wire and GND lug

1 1-ground wire

2 2-GND lug

- 2 Apply the thread-locker compound to the two flat head screws, then attach the GND lug to the L-bracket.

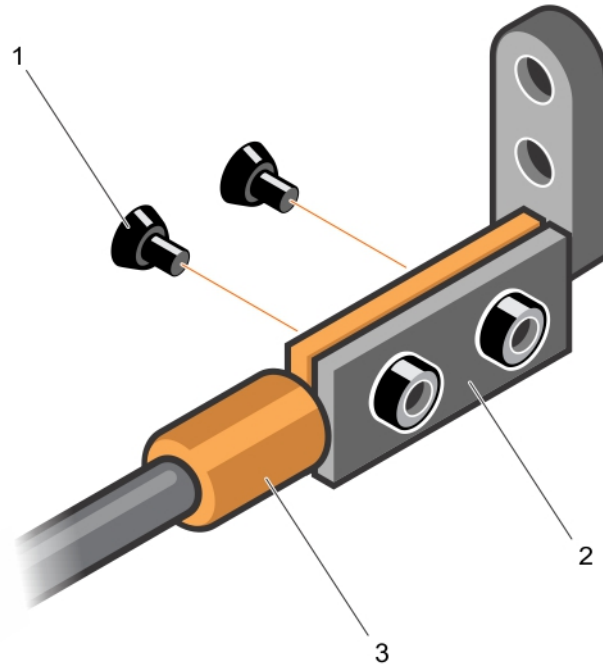


Figure 8. Screws, GND lug, and L-bracket assembly

- 1 1-Pan head screws
- 3 3-GND lug

- 2 2-L-bracket assembly

- 3 Attach the assembly to the S6010-ON chassis.
 - a Apply the thread-locker compound to the two pan head screws.
 - b Attach the GND lug and bracket assembly to the two-hole chassis ground connector nuts on the S6010-ON PSU side, tightening the screws to ensure torque between 3–5 inch/lbs.

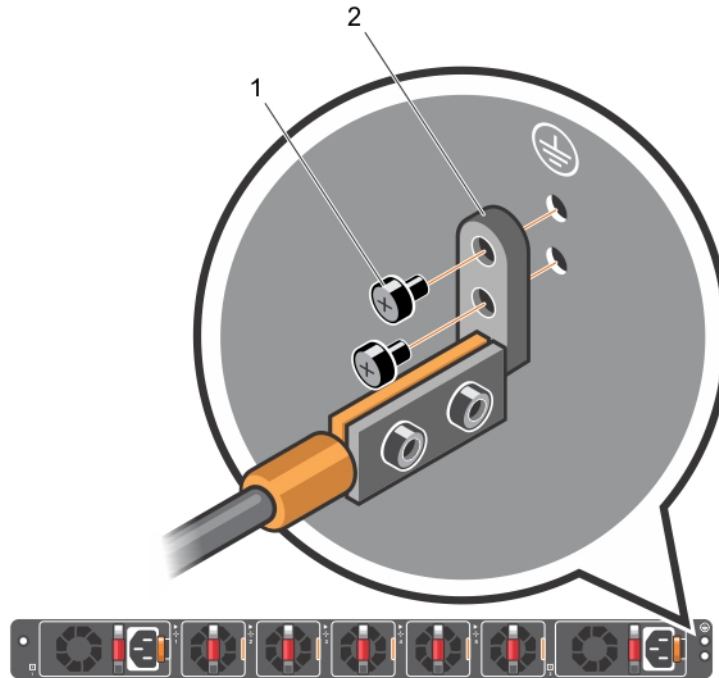


Figure 9. Assembly to S6010-ON PSU-side

1 1-Pan head screws

2 2-L-bracket

⚠ CAUTION: Take care not to damage the attached ground wire as you proceed to install the switch.

After you install the switch in the rack, see [Completing the Ground Wire Installation](#).

Install the Dell ReadyRails System

The ReadyRails rack mounting system is provided to easily configure your rack so that you can install your switch.

The Dell ReadyRails™ system is provided for 1U front-rack and two-post installations. The ReadyRails system includes two separately packaged rail assemblies and two rails that are shipped attached to the sides of the switch. Install the ReadyRails system using the 1U tool-less method or one of three possible 1U tooled methods (two-post flush mount, two-post center mount, or four-post threaded).

⚠ CAUTION: Your system is not NEBS Earthquake Z4-compliant if you use the 1U tool-less square-hole or two-post installation methods.

⚠ CAUTION: Do not use the mounted ReadyRails as a shelf or a workplace.

ⓘ NOTE: The illustrations in this document are not intended to represent a specific switch.

1U tool-less configuration

⚠ CAUTION: Do not use this method if you need your system to be NEBS Earthquake Z4-compliant.

1 With the ReadyRails flange ears facing outward, place one rail between the left and right vertical posts.

Align and seat the back flange rail pegs in the back vertical post flange. To see how the pegs appear in both the square and unthreaded round holes, see item 1.

- 2 Align and seat the front flange pegs in the holes on the front side of the vertical post.
- 3 Repeat this procedure for the second rail.
- 4 To remove each rail, pull on the latch release button on each flange ear and unseat each rail.

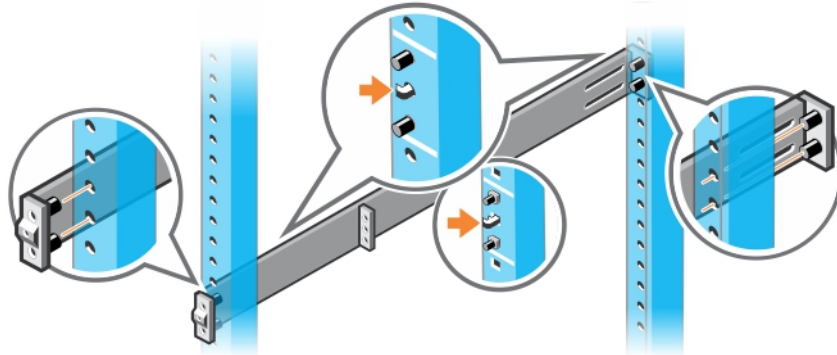


Figure 10. 1U tool-less configuration

Two-post flush-mount configuration

⚠ CAUTION: Your system is not NEBS Earthquake Z4-compliant if you use this installation method.

- 1 For this configuration, remove the castings from the front side of each ReadyRails assembly, item 1.
Use a Torx driver to remove the two screws from each front flange ear and remove each casting. Retain the castings for future rack requirements. Removal of the back flange castings is not necessary.
- 2 Attach one rail to the front post flange with two user-supplied screws, item 2.
- 3 Slide the plunger bracket forward against the vertical post and secure the plunger bracket to the post flange with two user-supplied screws, item 3.
- 4 Repeat this procedure for the second rail.

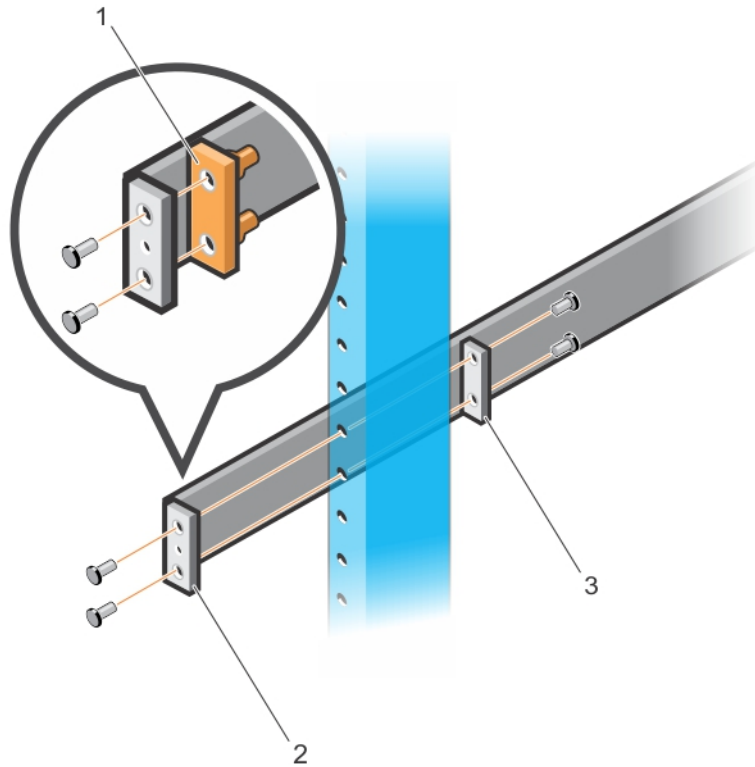


Figure 11. Two-post flush-mount configuration

Two-post center-mount configuration

⚠ CAUTION: Your system is not NEBS Earthquake Z4-compliant if you use this installation method.

- 1 Slide the plunger bracket rearward until it clicks into place and secure the bracket to the front post flange with two user-supplied screws, item 1.
- 2 Slide the back bracket towards the post and secure it to the post flange with two user-supplied screws, items 2 and 3.
- 3 Repeat this procedure for the second rail.

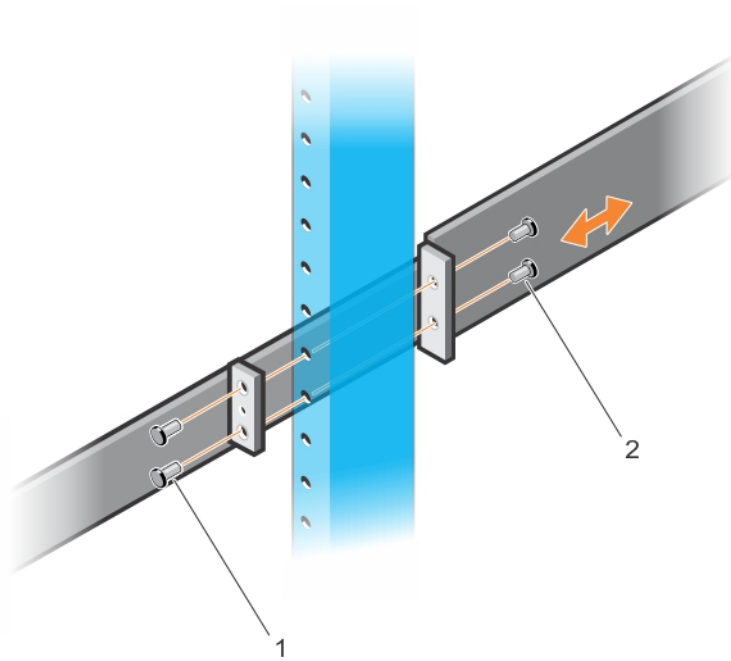


Figure 12. Two-post center-mount configuration

Four-post threaded configuration

⚠ CAUTION: To be NEBS Earthquake Z4-compliant, you must remove the tool-less latch castings described in Step 1.

- 1 Remove the latch castings from each end of the ReadyRails assemblies.
Use a Torx driver to remove the two screws from each latch casting and remove each casting, item 1. Retain the castings for future rack requirements.
- 2 For each rail, attach the front and back flanges to the post flanges with two user-supplied screws at each end, item 2.

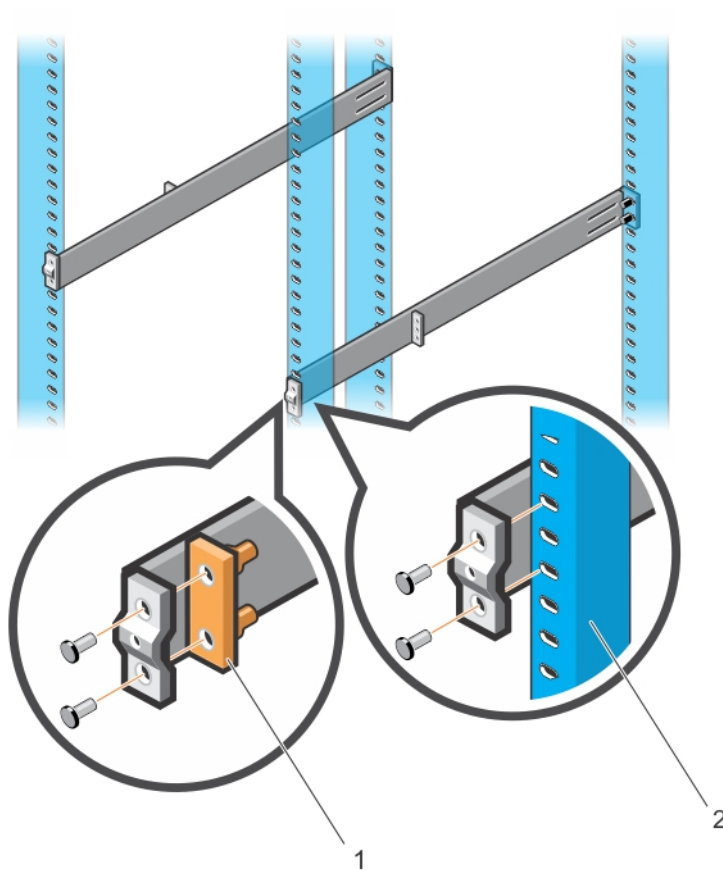


Figure 13. Four-post threaded configuration

1U two-post installation

You can install the switch in a 1U flush or center two-post configurations. Slide the system into the rails in the same manner as the four-post configurations.

1U front-rack installation

Configure the rails that are attached to the system.

- 1 Attach the switch inner chassis member rails to the system, items 1 and 2. Item 3 shows the front standoff with the locking tab.

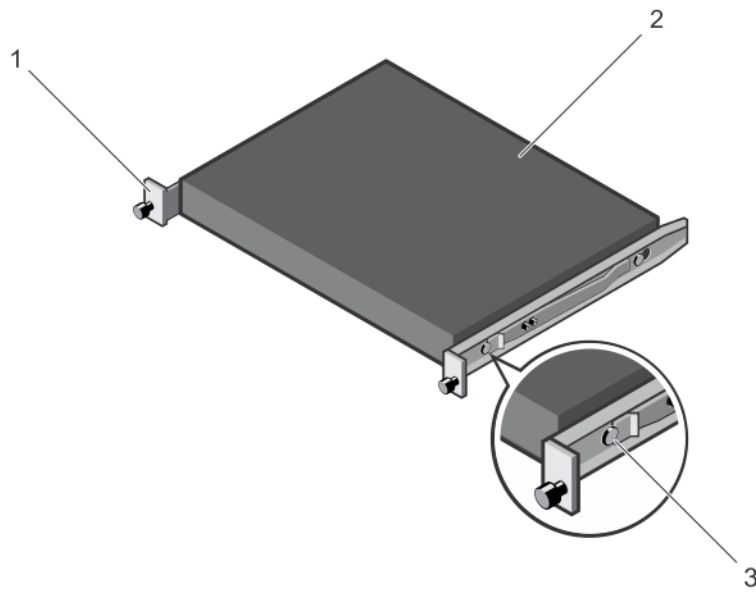


Figure 14. Switch rails attachment

- 2 After you have installed both switch rails, line them up on the previously mounted ReadyRails and slide the switch in, item 1. Approximately 3 inches before you fully insert your system, the rail locking feature engages to keep the switch from inadvertently sliding out of the rack and falling, items 2 and 3.

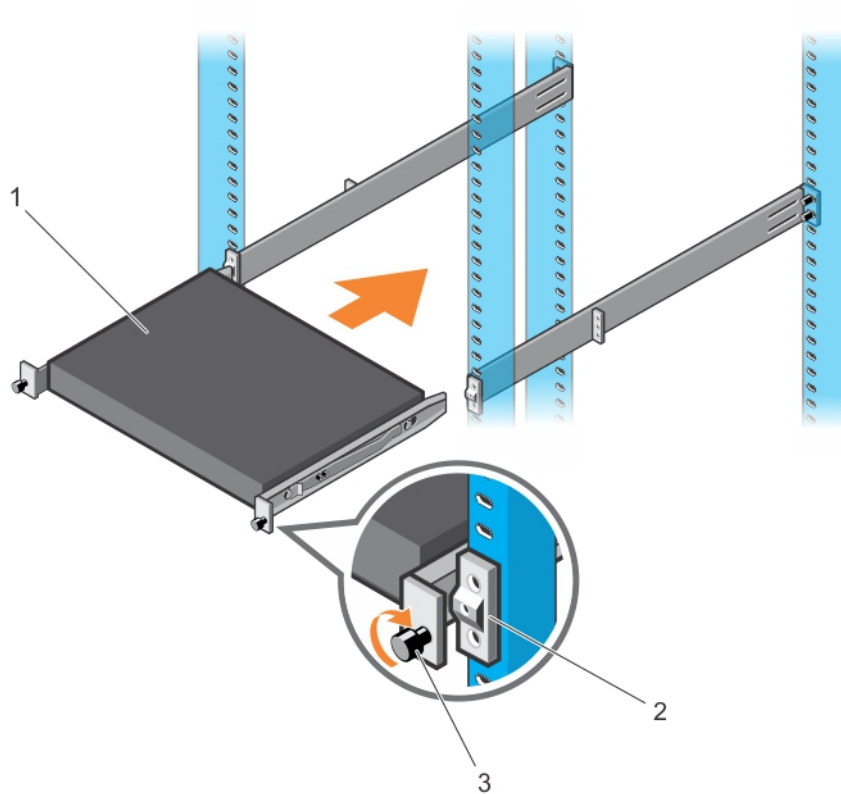


Figure 15. Front-rack configuration installation

Ground wire installation

After you have installed the S6010-ON switch in a rack, complete the installation of the ground wire.

You previously installed the GND lug and bracket assembly, with ground wire attached, to the chassis, see [Installing the Ground Lug and Bracket Assembly](#).

Supply the following items:

- One 2-hole UL-certified GND lug to attach ground wire to rack
- Two National Electric Code (NEC) compliant screws to attach the GND lug to the rack
- Anti-oxidant compound
- Crimping tool

- 1 Measure and cut a length of wire sufficient to reach between the system-installed GND lug and the rack-end GND lug.
- 2 Attach the end of the wire to the rack-end GND lug.
 - a Coat the bare end of the wire with an anti-oxidant compound.
 - b Insert the end of the wire into the lug.
 - c To secure the connection, crimp the lug.

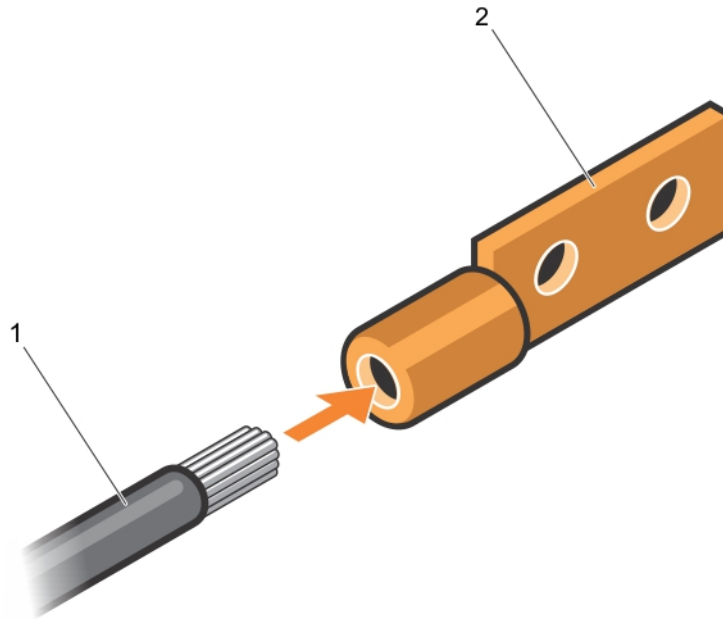


Figure 16. Ground wire and GND lug

1 1-ground wire

2 2-GND lug

- 3 Install the second GND lug in compliance with NEC guidelines at the desired location on your rack to ground the switch.
 - a Ensure that the rack mating surface is clean.
 - b Bring any bare metal to a bright finish.
 - c Apply the anti-oxidant compound to the mating surfaces before mating.

SFP+ and QSFP+ optic installation

S6010-ON ports include 32 ports that function either as 40 GbE, or, using breakout cables, as a configuration of 96 ports of 10 GbE SFP+. The 32 ports also include eight, ports 13-20, that are 40 GbE QSFP+.

For a list of supported optics, see the S6010-ON Specification Sheet at www.dell.com/support/ or contact your Dell representative.

⚠ CAUTION: ESD damage can occur if the components are mishandled. Always wear an ESD-preventive wrist or heel ground strap when handling the S6010-ON and its components.

⚠ WARNING: When working with optical fibers, follow all the warning labels and always wear eye protection. Never look directly into the end of a terminated or unterminated fiber or connector as it may cause eye damage.

- 1 Position the optic in the correct position. The optic key prevents it from being inserted incorrectly.
- 2 Insert the optic into the port until it gently snaps into place.

① NOTE: The top row of QSFP+ ports requires that you install the 40 GbE optics with the tabs facing up. The bottom row of QSFP+ ports requires that you install the 40 GbE optics with the tabs facing down.

① NOTE: When you cable the ports, do not interfere with the airflow from the small vent holes preceding and below the ports.

Optic removal

Remove an optic by pushing the tab on the optic and sliding the optic from the port.

When removing optics with direct attach cables (DACs) from the port, pull the release tab firmly and steadily. Before pulling the release tab, you may need to gently push the optic into the port to ensure it is seated properly. Do not jerk or tug repeatedly on the tab.

System power-up

Supply power to the S6010-ON after it is mounted in a rack or cabinet.

Dell recommends reinspecting your system before powering up. Verify the following:

- The equipment is properly secured to the rack and properly grounded, optional.
- The equipment rack is properly mounted and grounded, optional.
- The ambient temperature around the unit, which may be higher than the room temperature, is within the limits specified for the S6010-ON, see [Specifications](#).
- There is sufficient airflow around the unit.
- The input circuits are correctly sized for the loads and that you use sufficient overcurrent protection devices.
- All protective covers are in place.
- Blank panels are installed if you do not install optional modules.

NOTE: A US AC power cable is included for powering up an AC power supply. You must order all other power cables separately.

NOTE: ESD damage can occur if components are mishandled. Always wear an ESD-preventive wrist or heel ground strap when handling the S6010-ON system and its components.

Power up sequence

When the system powers up, the fans immediately come on at high speed. The fan speed slows as the system continues to boot up.

The Power 1 LED and Power 2 LED, if you installed two PSUs, blink until the boot-up sequence is complete. When bootup finishes, the power LEDs are steadily lit.

Before you install an OS

After powering on the S6010-ON system, it goes through a power-on self-test (POST).

POST runs every time the switch initializes and checks hardware components to determine if the switch is fully operational before booting. After POST, the system uses the Grub bootloader.

Use the up and down arrow keys to select which entry is highlighted. To select an operating software-selected OS or enter `e` to edit the commands before booting, press **Enter**. Enter `c` for a command line. The highlighted entry runs automatically in the operating system.

Grub bootloader example

```
GNU GRUB version 2.02~beta2+e4a1fe391
```

```
+-----+
|*ONIE: Install OS      |
| ONIE: Rescue          |
| ONIE: Uninstall OS   |
| ONIE: Update ONIE    |
| ONIE: Embed ONIE     |
+-----+
```

```
| ONIE: Diag ONIE
```

Your system comes with open networking installation environment (ONIE) installed.

ONIE example

```
ONIE: Install OS
  For downloading and installing an OS from a URL
  Starts ONIE with ONIE Discovery Service
  (factory default boot)
ONIE: Rescue
  Starts ONIE without ONIE Discovery Service
  Useful for running Diagnostics manually
ONIE: Uninstall OS
  Restore to factory defaults erases any installed OS
ONIE: Update ONIE
  For downloading and updating ONIE from a URL
ONIE: Embed ONIE
  For downloading and updating ONIE from a URL and erases any installed OS
ONIE: Diag ONIE
  Run Diagnostic package for S6010-ON
```

During initial setup, the system boots to ONIE Install. ONIE Install boots with ONIE Discovery to the console, ONIE:.

To configure your system, see your third-party ONIE-compatible OS or Dell OS documentation.

Power supplies

The S6010-ON supports two hot-swappable power supply units (PSUs) with integrated fans that provide cooling for the system.

The system supports AC or DC power supplies with two air-flow directions—from the I/O to the PSU side and from the PSU to the I/O side. Two PSUs are required for full redundancy, but the system can operate with a single PSU.

The PSUs are field replaceable. When running with full redundancy—two power supplies installed and running, you can remove and replace one PSU without disrupting traffic.

The S6010-ON does not support mixing PSU types. You cannot replace an AC PSU with a DC PSU and you cannot replace an AC-R PSU with a DC-R PSU.

NOTE: If you use a single PSU, install a blank plate in the other PSU slot. Dell recommends using power supply 1 (PSU1) as the blank plate slot.

NOTE: ESD damage can occur if components are mishandled. Always wear an ESD-preventive wrist or heel ground strap when handling the S6010-ON and its components.

CAUTION: To prevent electrical shock, ensure that the S6010-ON is grounded properly. If you do not ground your equipment correctly, excessive emissions may result. Use a qualified electrician to ensure that the power cables meet your local electrical requirements.

Topics:

- [Components](#)
- [AC power supply installation](#)
- [AC power supply replacement](#)
- [DC power supply connection](#)

Components

The following power supply options are available for the S6010-ON:

- AC power supply with integrated fan
- AC power supply with integrated reverse flow fan
- DC power supply with integrated fan
- DC power supply with integrated reverse flow fan

Power supply unit 0, PSU 0, is on the left side of the chassis; power supply unit 1, PSU 1, is on the right side of the chassis.

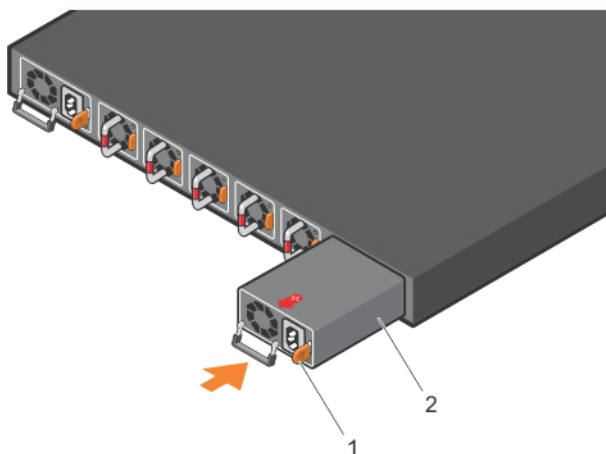


Figure 18. S6010-ON AC power supply installation

- 1 1-PSU
- 2 2-PSU slot

When you install the PSU correctly, it snaps into place and is flushed with the back of the switch.

- 4 Plug in the appropriate three-prong AC power cord from the switch PSU to the external power source.
- 5 Repeat steps 1 through 4 using the second PSU slot if you have a redundant PSU.

NOTE: The S6010-ON powers up when you connect the cables between the power supply and the power source.

AC power supply replacement

CAUTION: Disconnect the power cord before removing the power supplies. Also, disconnect all power cords before servicing.

NOTE: The PSU slides into the slot smoothly. Do not force a PSU into a slot as this action may damage the PSU or the S6010-ON chassis.

NOTE: If a PSU fails, replace the entire unit. There are no field serviceable components in the PSU. To request a hardware replacement, see [Dell Support](#).

NOTE: If you use a single PSU, install a blank plate in the other PSU slot. Dell recommends using power supply 1 (PSU1) as the blank plate slot.

- 1 Disconnect the power cable from the PSU.
- 2 Use the grab handle to slide the PSU out of the power supply bay.
- 3 Use the grab handle on the replacement PSU to slide it into the power supply bay.
- 4 Attach the power cord to the replacement PSU.

NOTE: The system powers up when you connect the cables between the power supply and the power source.

DC power supply connection

Each sold-separately DC PSU kit comes with a connector cable.

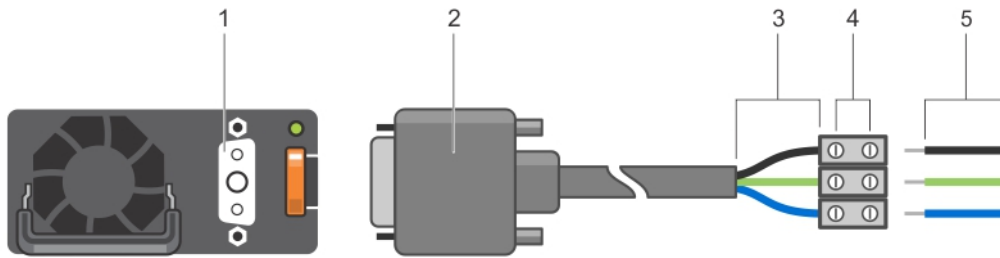


Figure 19. DC power supply and connector cable

- | | | | |
|---|-----------------------|---|-----------------------------------|
| 1 | DC PSU power socket | 2 | Cable connector with thumb screws |
| 3 | Cable connector wires | 4 | Wiring block |
| 5 | DC power source wires | | |

- Strip 1/2 inches of insulation from each of the site's DC power source black, green, and blue wires, item 5.
- Insert each of the site's DC power source's bare wire lengths into the wiring block, matching wire colors, items 3 and 4.

CAUTION: Do not cross the wires—in the wiring block, blue aligns with blue, green aligns with green, and black aligns with black.

- Use a flat-blade screwdriver to tighten the screws that secure the bare wires into the wiring block.
- Insert the DC power connector cable end into the power socket of the DC PSU and tighten the thumb screws, items 1 and 2.

CAUTION: Never force the power connector into or out of the DC PSU power socket.

NOTE: To remove the power connector from a DC PSU, unscrew the thumb screws and pull the power connector from the DC PSU socket.

Fans

The S6010-ON comes from the factory with two PSUs and five fan modules installed in the chassis. The fan modules and the integrated fan-power supply are hot-swappable.

NOTE: To run the system, both slots must have operating fan units. If you do not install a module in each slot, either as part of the PSU or as an independent fan module, the system shuts down in one minute.

In addition to the integrated fan/power supply modules, you can order and install fan modules separately.

The system supports two airflow direction options. Do not mix airflow types in a chassis; you can use only a single airflow direction in a chassis. If you mismatch the airflow directions, the system powers down in one minute.

- Normal—airflow is from the I/O side to the PSU side.
- Reversed—airflow is from the PSU side to the I/O side.

All fans and PSUs in a configuration must be in the same airflow direction.

Environmental factors can decrease the amount of time required between fan replacements. Check the environmental factors regularly. An increase in temperature and/or particulate matter in the air might affect performance; for example, new equipment installation.

CAUTION: Check the fans at six-month intervals and replace them as necessary. To accurately determine replacement intervals, regularly monitor the speeds of the cooling fans.

Topics:

- [Components](#)
- [Fan module installation](#)
- [Fan module replacement](#)
- [Fan air filter replacement](#)

Components

The following list the fan components:

- S6010-ON AC power supply with integrated fan module
- S6010-ON AC power supply with integrated fan module—Reverse flow
- S6010-ON DC power supply with integrated fan module
- S6010-ON DC power supply with integrated fan module—Reverse flow

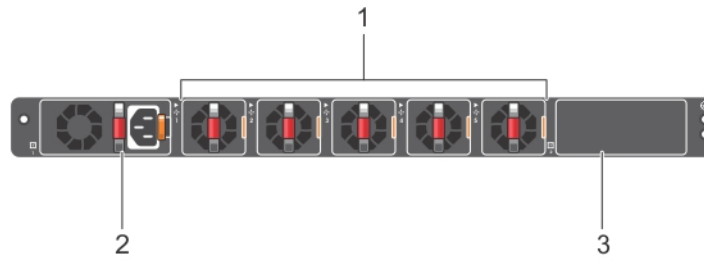


Figure 20. AC PSU with one module

- | | |
|--|---|
| <ol style="list-style-type: none"> 1 Fan modules 3 PSU 1 with slot cover | <ol style="list-style-type: none"> 2 PSU 0 with integrated fan |
|--|---|

Fan module installation

The fan modules in the S6010–ON are field replaceable. Module slot 0 is on the left side of the chassis; module slot 1 is on the right side of the chassis.

⚠ CAUTION: DO NOT mix airflow directions. Both fans must use the same airflow direction—either reverse or normal.

- 1 Take the fan module out of the shipping box.
- 2 Use the grab handle to slide the module into the bay until the latch securely snaps into place.

Fan module replacement

⚠ CAUTION: Complete steps 2 and 3 within one minute or the system powers down.

- 1 Loosen the securing screws on the sides of the fan module.
- 2 Use the grab handle to slide the fan module out of the bay.
- 3 Use the grab handle to slide the module into the bay until the latch securely snaps into place.

Fan air filter replacement

Environmental factors can decrease the amount of time required between air filter replacements. Check the environmental factors regularly. An increase in temperature and/or particulate matter in the air might affect performance.

⚠ CAUTION: Check the fan air filters at six-month intervals and replace them as necessary. To accurately determine air filter replacement intervals, regularly monitor the speeds of the cooling fans. An increase in overall fan speed may indicate a clogged filter.

You must replace the fan air filters with new filters; you cannot clean and reuse the old fan air filters. Replacement filter media must meet the requirements found in GR-63-CORE.

- Minimum dust arrestance of 65%, per ASHRAE Standard 52.1-1992. OR
- Minimum Efficiency Rating Value (MERV) of 2, per ANSI/ASHRAE Standard 52.2-2007.

⚠ CAUTION: For Network Equipment Building Systems (NEBS) compliance, use NEBS approved filters.

Use fan air filters with reverse air flow systems—blue banded PSUs and fans. You can replace the air filters individually on each fan within the system without powering down a PSU module or disrupting traffic.

The fan air filter media slides into the frame from the top. No tools are required.

- 1 Determine which filters to replace.
- 2 Unlatch and remove the first module that needs the filter replaced.
- 3 Slide the existing filter upwards to remove it from the module.
- 4 Replace the filter with a new filter of the same size.
- 5 Repeat for the remaining modules that need the filter replaced.

Management ports

Besides the 10 Gbps and 40 Gbps switch ports, the S6010-ON provides several ports for management and storage.

Topics:

- [RS-232 console port access](#)
- [Micro USB-B console port access](#)
- [USB storage mount](#)

RS-232 console port access

The RS-232 console port is on the I/O side of the S6010-ON chassis.

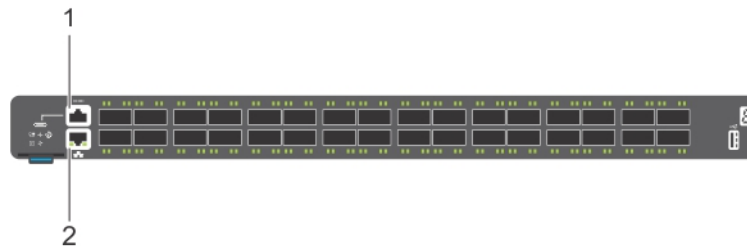


Figure 21. S6010-ON RS-232 console and management ports

- | | | | | |
|---|---------------------|--|---|-----------------|
| 1 | RS-232 console port | | 2 | Management port |
|---|---------------------|--|---|-----------------|

NOTE: When connecting the RJ45 console to the patch panel or terminal server using Cat5e or Cat6 Ethernet cables, the maximum cable length is 100m. However, if the Ethernet cable is disconnected from the patch panel or terminal server but connected to the RJ45 console, the maximum cable length is 6m. If the cable is longer than 6m when disconnected from the panel or server, your switch may not boot.

NOTE: Before starting this procedure, be sure that your PC has a 9-pin serial port and you have a terminal emulation program already installed and running on the PC.

NOTE: If your PC's serial port cannot accept a female DB-9 connector, use a DB-9 male-to-male adaptor.

- 1 Install the provided RJ-45 connector side of the provided copper cable into the console port.
- 2 Install the DB-9 female side of the provided copper cable into your PC's serial port or into other DTE terminal server hardware that you intend to use.
- 3 Keep the default terminal settings on the console as follows:
 - 9600-baud rate—the default is 115200-baud rate
 - No parity
 - Eight data bits
 - One stop bit
 - No flow control

Micro USB-B console port access

The Micro USB-B console port is to the left of the RS-232/RJ-45 console port on the I/O side of the switch.

NOTE: The S6010-ON switch uses the Silicon Labs CP2109 USB-B chip. To find the correct USB-B universal asynchronous receiver-transmitter (UART) driver, see <https://www.silabs.com/products/development-tools/software/usb-to-uart-bridge-vcp-drivers>.

The terminal settings are the same for the Micro USB-B console port and the RS-232/RJ-45 console port:

- 115200-baud rate
- No parity
- Eight data bits
- One stop bit
- No flow control

NOTE: The Micro USB-B console port does not provide console access in the ONIE bootloader or ONIE. To navigate the ONIE bootloader and access ONIE, use the RS-232/RJ-45 serial console port.

NOTE: Before starting this procedure, be sure that you have a terminal emulation program already installed on your PC. Install the appropriate drivers to support the Micro USB-B port. For assistance, contact Dell Technical Support.

- 1 Power on the PC.
- 2 Connect the USB-A end of cable into an available USB port on the PC.
- 3 Connect the Micro USB-B end of cable into the Micro USB-B console port on the system.
- 4 Power on the system.
- 5 Install the necessary USB device drivers.
You need an internet connection. For assistance, contact Dell Technical Support.
- 6 To access the S6010-ON, open your terminal software emulation program.
- 7 Keep the default terminal settings as follows:
 - 115200-baud rate
 - No parity
 - Eight data bits
 - One stop bit
 - No flow control

USB storage mount

USB storage does not automatically mount. The supported file system is FAT. To use USB storage, you must first mount the device.

- 1 Create a mount directory for the USB.

```
ONIE:/ # mkdir /mnt/usb
```

- 2 View the fixed disks using fdisk.

```
ONIE:/mnt # fdisk -l
```

For internal storage:

```
Disk /dev/sda: 15.8 GB, 15829303296 bytes
255 heads, 63 sectors/track, 1924 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
```

Device	Boot	Start	End	Blocks	Id	System
/dev/sda1		1	1925	15458303+	ee	EFI GPT

For USB storage:

```
Disk /dev/sdb: 30.9 GB, 30942946304 bytes
64 heads, 32 sectors/track, 29509 cylinders
Units = cylinders of 2048 * 512 = 1048576 bytes
```

```
Device Boot      Start          End      Blocks   Id  System
```

- 3 Mount the device `/dev/sdb` to the `/mnt/usb` directory.

```
ONIE:/ # mount -t vfat /dev/sdb /mnt/usb
```

NOTE: The following message displays if the `/mnt/usb` directory is missing: `mount: mounting /dev/sdb on /mnt/usb failed: No such file or directory.`

NOTE: The following message displays if the USB device is not seen: `mount: mounting /dev/sdb on /mnt/usb failed: No such device or address.`

- 4 OPTIONAL: Add a device to the file systems table (`fstab`) and mount the file systems.

```
ONIE:/ # vi /etc/fstab
```

```
# FSTAB entry for the ONIE-BOOT partition mounted on /boot
LABEL=ONIE-BOOT /mnt/onie-boot ext4 defaults,rw,errors=remount-ro 0 1
/dev/sdb        /mnt/usb          vfat defaults                                0 1
```

```
ONIE:/ # mount -a
```

Specifications

This chapter lists the S6010–ON specifications.

⚠ CAUTION: Operate the product at an ambient temperature not higher than 113°F (45°C).

⚠ CAUTION: Lithium Battery Caution: There is a danger of explosion if the battery is incorrectly replaced. Replace only with same or equivalent type of battery. Dispose of the batteries according to the manufacturer's instructions.

ℹ NOTE: For RoHS information, see [Restricted Material Compliance](#).

Topics:

- Chassis Physical Design
- IEEE standards
- Agency Compliance

Chassis Physical Design

Table 3. Chassis physical design

Parameter	Specifications
Height	1.71 inches (43.5 mm)
Width	17.09 inches (434 mm)
Depth	18.11 inches (460 mm)
Weight	21.7 lbs (9.86 kg)

Table 4. Environmental parameters

Parameter	Specifications
Operating Temperature	32° to 113°F (0° to 45°C)
Operating Humidity	5% to 90% (RH), noncondensing
Storage Temperature	–40° to 158°F (–40° to 70°C)
Storage Humidity	5% to 95% (RH), noncondensing
Maximum Thermal Output	1153.265BTU/hr

Table 5. AC power requirements

Parameter	Specifications
Power Supply	100–240Vac 50/60Hz
Maximum Current Draw Per System	4.11A @411W/100Vac

Parameter	Specifications
	2.05A @ 411W/200Vac
Maximum Power Consumption	411W = 1402 BTU/hr
Typical Power Consumption	398W

Table 6. DC power requirements

Parameter	Specifications
Minimum/Maximum Input Voltage Range	-40.5V / -48V / -60V
Input Power at Full Load	-40.5V/970W -48V/930W -60V/ 950W, without fan -40.5V/980W -48V/940W -60V/ 960W, with fan
Input Current at Full Load	-40.5V/23.8A -48V/19.0A -60V/ 15.6A, without fan -40.5V/24A -48V/19.2A -60V/ 16.0A, with fan
Start up VDC	39.0+/-1.5V
Start off VDC	37.5+/-1.5V

IEEE standards

The S6010-ON complies with the following IEEE standards:

- 802.3ab Gigabit Ethernet (1000BASE-T)
- 802.3ae 10 Gigabit Ethernet (10GBASE-X)
- 802.3ba 40 Gigabit Ethernet (40GBase-SR4, 40GBase-CR4) on optical ports
- 802.3u Fast Ethernet (100BASE-TX)
- 802.3z Gigabit Ethernet (1000BASE-X)

Agency Compliance

The S6010-ON is designed to comply with the following safety and agency requirements.

USA Federal Communications Commission (FCC) Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designated to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy. If it is not installed and used in accordance to the instructions, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case users will be required to take whatever measures necessary to correct the interference at their own expense.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Dell Networking is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications in the equipment. Unauthorized changes or modification could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Industry Canada Class A emission compliance statement

This Class A digital apparatus complies with Canadian ICES-003.

Avis de conformité à la réglementation d'Industrie Canada

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Figure 22. Canadian Department of Communication Statement

European Union EMC Directive Conformance Statement

This product is in conformity with the protection requirements of EU Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility. Dell Networking can not accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of this product, including the fitting of non-Dell Networking option cards.

This product has been tested and found to comply with the limits for Class A Information Technology Equipment according to CISPR 22/ European Standard EN 55022. The limits for Class A equipment were derived for commercial and industrial environments to provide reasonable protection against interference with licensed communication equipment.

⚠ WARNING: This is a Class A product. In a domestic environment, this device may cause radio interference, in which case, you may be required to take adequate measures.

Japan: VCCI Compliance for Class A Equipment

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

Figure 23. Japan: VCCI Compliance for Class A Equipment

⚠ WARNING: Use the AC power cords with Dell Networking equipment only. Do not use Dell Networking AC power cords with any unauthorized hardware.

This is Class A product based on the standard of the Voluntary Control Council For Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.

本製品に同梱いたしております電源コードセットは、本製品専用です。本電源コードセットは、本製品以外の製品ならびに他の用途でご使用いただくことは出来ません。製品本体には同梱された電源コードセットを使用し、他製品の電源コードセットを使用しないで下さい。

Figure 24. Japan: Warning Label

Korean Certification of Compliance

A급 기기 (업무용 방송통신기자재)	이 기기는 업무용(A급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정외의 지역에서 사용하는 것을 목적으로 합니다.
------------------------	---

Figure 25. Korean Certification of Compliance


	 [equipment type]
품명(Product Name)	Ethernet Switch
모델명(Model)	[model number]
신청인(Applicant)	Force10 Networks, Inc.
제조사(Manufacturer)	Delta Networks, (Dongguan) Ltd.
제조년월(Manufacturing Date)	[date]
제조국(Country of Origin)	China

Figure 26. Korean Package Label

Safety Standards and Compliance Agency Certifications

- CUS UL 60950-1, 2nd Edition
- CSA 60950-1-03, 2nd Edition
- EN 60950-1, 2nd Edition
- EN 60825-1, 1st Edition
- EN 60825-1 Safety of Laser Products—Part 1: Equipment Classification Requirements and User's Guide
- EN 60825-2 Safety of Laser Products—Part 2: Safety of Optical Fibre Communication Systems
- FDA Regulation 21CFR 1040.10 and 1040.11
- IEC 60950-1, 2nd Ed, including all National Deviations and Group Differences

Electromagnetic Compatibility (EMC)

Emissions

- International: CISPR 22: 2006, Class A
- Australia/New Zealand: AS/NZS CISPR 22:2009, Class A
- Canada: ICES-003, Issue-4, Class A
- Europe: EN55022 2006 (CISPR 22: 2006), Class A
- Japan: VCCI V-3/2011.04 Class A
- USA: FCC CFR47 Part 15, Subpart B, Class A

Immunity

- EN 300 386 v1.5.1:2010 EMC for Network Equipment
- EN55022 2006, Class A
- EN 55024 1998 + A1: 2001 + A2: 2003
- EN 61000-3-2 Harmonic Current Emissions
- EN 61000-3-3 Voltage Fluctuations and Flicker
- EN 61000-4-2 ESD
- EN 61000-4-3 Radiated Immunity
- EN 61000-4-4 EFT
- EN 61000-4-5 Surge
- EN 61000-4-6 Low Frequency Conducted Immunity

Product Recycling and Disposal

You must recycle or discard this system according to applicable local and national regulations. Dell Networking encourages owners of information technology (IT) equipment to responsibly recycle their equipment when it is no longer needed. Dell Networking offers a variety of product return programs and services in several countries to assist equipment owners in recycling their IT products.

Waste Electrical and Electronic Equipment (WEEE) Directive for Recovery, Recycle and Reuse of IT and Telecommunications Products

Dell Networking switches are labeled in accordance with European Directive 2002/96/EC concerning waste electrical and electronic equipment (WEEE). The Directive determines the framework for the return and recycling of used appliances as applicable throughout the European Union. This label is applied to various products to indicate that the product is not to be thrown away, but rather reclaimed upon end of life per this Directive.



Figure 27. The European WEEE Symbol

In accordance with the European WEEE Directive, electrical and electronic equipment (EEE) is to be collected separately and to be reused, recycled, or recovered at end of life. Users of EEE with the WEEE marking per Annex IV of the WEEE Directive, as shown above, must not dispose of end of life EEE as unsorted municipal waste, but use the collection framework available to customers for the return, recycling and recovery of WEEE. Customer participation is important to minimize any potential effects of EEE on the environment and human health due to the potential presence of hazardous substances in EEE.

Dell Networking products, which fall within the scope of the WEEE, are labeled with the crossed-out wheeled-bin symbol, as shown above, as required by WEEE.

To access information on Dell Networking product recycling offerings, go to <https://www.dell.com/support/>.

Dell support

The Dell support site provides a range of documents and tools to assist you with using Dell equipment and mitigating the impact of network outages. Through the support site you can obtain technical information regarding Dell products, access software upgrades and patches, download available management software, and manage your open cases. The Dell support site provides integrated, secure access to these services.

To access the Dell Support site, go to www.dell.com/support/. To display information in your language, scroll down to the bottom of the web page and select your country from the drop-down menu.

- To obtain product-specific information, enter the 7-character service tag or 11-digit express service code of your S6010–ON system and click **Submit**. To view the assigned service tag or express service code, pull out the S6010–ON luggage tag as shown in the following illustration.
- To receive additional kinds of technical support, click **Contact Us**. On the **Contact Information** web page, click **Technical Support**.

To access S6010–ON documentation, go to www.dell.com/manuals/.

To search for drivers and downloads, go to www.dell.com/drivers/.

To participate in Dell community blogs and forums, go to www.dell.com/community.

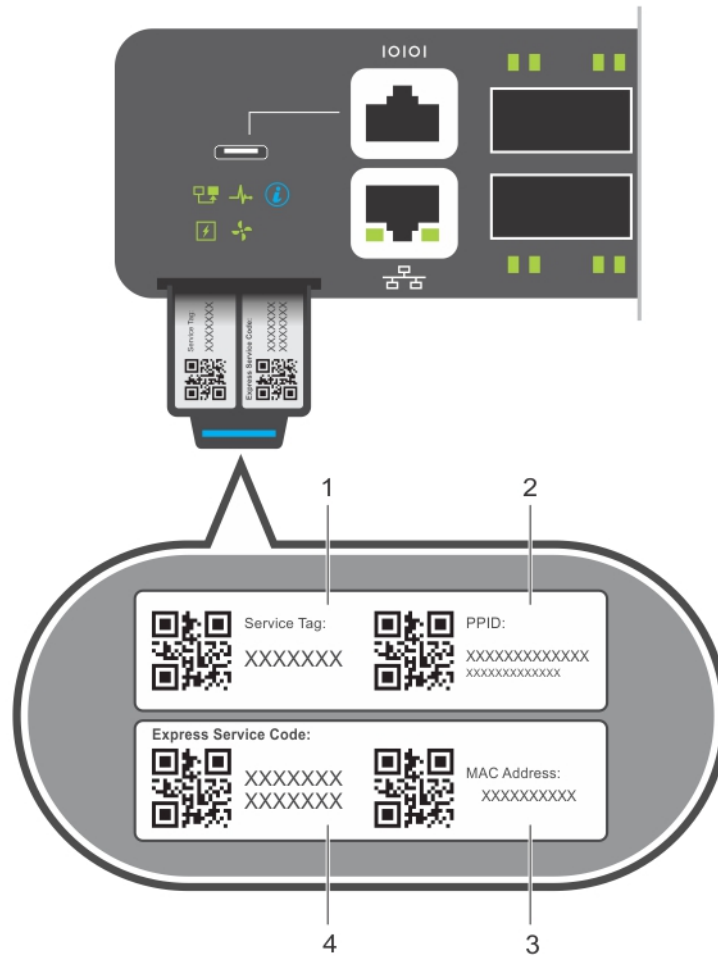


Figure 28. S6010-ON luggage tag

- | | | | |
|---|-------------|---|----------------------|
| 1 | Service tag | 2 | PPID |
| 3 | MAC address | 4 | Express service code |