Hewlett Packard Enterprise

HPE Edgeline EL300 Converged Edge System Setup and Configuration Guide

Abstract

This document is for the person who installs, administers, and troubleshoots servers and storage systems. Hewlett Packard Enterprise assumes you are qualified in the servicing of computer equipment and trained in recognizing hazards in products with hazardous energy levels.

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Overview

The HPE Edgeline EL300 Converged Edge System is a compact modular device that provides an effective way to connect and manage various operational systems such as control systems, data acquisitions system, and industrial networks. It supports remote management over both wireless and wired networks.

This document provides information on setting up and configuring the HPE Edgeline EL300 Converged Edge System. It also provides installation information for the hardware options available for the system.

About Integrated System Manager (iSM)

HPE Edgeline Integrated System Manager (iSM) is a remote management tool embedded in the HPE Edgeline EL300 Converged Edge System. iSM allows system administrators to remotely configure, update, and monitor system health and activity. The embedded iSM management module has its own network connection and IP address to which administrators connect on their dedicated management network, even when the system is powered down. Depending on hardware configuration, Edgeline systems with iSM can be connected to a management network using Ethernet or a wireless Wi-Fi, 3G, 4G, or LTE connection. iSM offers a Web-based console (iSM GUI), a command line interface (iSM CLI), and is accessible using the REST API.

Other available optional management software

Other optional centrally-installed management software packages are available to help manage HPE Edgeline EL300 Converged Edge Systems:

- HPE Edgeline Infrastructure Manager

- HPE Edgeline OT Link Platform

- HPE Edgeline Workload Orchestrator

NOTE: The optional software can be used to manage the HPE EL300 system after completing the initial HPE EL300 and HPE iSM setup. After setup, each HPE EL300 is available to the optional management software.

About HPE Edgeline Infrastructure Manager

The Edgeline Infrastructure Manager (EIM) supports discovery, monitoring, and management of Edgeline Converged Edge Systems.

It is delivered as a Virtual Machine image (OVA) targeted at running on VMware ESXi, Workstation, or Player. There are two user interfaces: a local console running a dedicated web browser connected to the appliance UI; and the user's own web browser connected to the web server running on the appliance.

For more information about Edgeline Infrastructure Manager, see the user guide at the following website: **www.hpe.com/info/edgeline-docs**.

About HPE Edgeline OT Link Platform

The HPE Edgeline OT Link Software bridges the gap between data in the field or factory and business applications for companies looking to implement Industrial Internet of Things (IoT) solutions and enable simple, fast, and predictable IoT implementations. The different Edgeline industrial software and hardware work seamlessly together to allow companies to access and exploit data previously trapped inside Industrial equipment, no matter where or when it was deployed. It also offers data and device management so companies can optimize both how they run their business and how their customers businesses operate.

About HPE Edgeline Workload Orchestrator

HPE Edgeline Workload Orchestrator enables users to centrally deploy and manage workloads running on multiple Edgeline systems. Users can deploy workflows and application containers to one or more Edgeline systems located in the same or

geographically distributed locations. For example, a user can create a workflow and application set on an HPE Edgeline OT Link Platform and then deploy it on additional systems with the Edgeline Workload Orchestrator. By centralizing creation and deployment, Workload Orchestrator simplifies the provisioning of multiple systems that perform similar functions. Using Workload Orchestrator to centralize management of the OT Link Platform on numerous Edgeline Converged Edge Systems cuts the time and effort required to deploy, update, and manage the software stack running on those systems.

HPE Edgeline Workload Orchestrator provides centralized dashboards that depict the operational status across all OT Link systems and consolidates information from those systems. Workload Orchestrator dashboards enables users to tailor the information displays.

Setup and configuration

Checklist

Complete this checklist to set up, install, and configure your new HPE Edgeline EL300 Converged Edge System .

1. Unbox the system and **identify the components**.

2. **Verify that the intended installation site conforms to space, airflow, temperature, and power requirements**.

3. Install applicable hardware options:

   - **Power adapter**

   - **8 GB SD card kit**

   - **SFF to M.2 drive cage kit**

   - **SATA/M.2 drive**

4. Install wireless network kits and antennas:

   - **HPE EL Network WiFi card**

   - **WiFi antenna**

   - **HPE EL Network LTE card**

   - **LTE antenna**

5. Mount the system:

   - **Wall mounting**

   - **DIN rail mounting**

   - **Base only bracket kit**

   - **Standard bracket kit**

6. **Prepare to configure the system:**

   a. Verify OS support.

   b. Gather OS installation media and necessary keys.

   c. Verify network connectivity.

   d. Plan for network address.

7. **Connect to theism and configure the system using one of the available methods**:

   - **Connect using the WiFi Access Point**.

   - **Connect to the iSM web interface**.

   - **Connect to the iSM CLI using serial cable**.

8. **Complete the configuration**.

9. **Install an iSM Advanced license**.

10. **Register your system with HPE**.

TIP: Did you know that HPE has QR codes on all systems? Scan one to access important information on your mobile device:

hpe.com/qref/el300

Not interested is scanning the QR code? Click the following link to access the mobile pages for quick setup, maintenance, and troubleshooting information:

http://www.hpe.com/qref/el300

Components and site requirements

In this chapter, you can find the following:

- Component identification
- System installation site requirements

Component identification

This chapter describes the external and internal server features and components.

HPE Edgeline EL300 Converged Edge System configurations

The HPE Edgeline EL300 Converged Edge System is available in two base configurations:

- HPE Edgeline EL300 Mini-ITX Converged Edge System (P06211-B21)

  This system is compatible with Intel i5 processor.

- HPE Edgeline EL300 V2 Converged Edge System (P25828-B21)

  This system is compatible with Intel i7 processor, it also supports ignition switch for the 9-36VDC power option.

The HPE Edgeline EL300 Converged Edge System supports daughter card option for expanding the number for interface required. The supported daughter cards are compatible with both 9-36 VDC and 12 VDC power supply options. Depending on the daughter card installed, different configurations are available for the EL300 system:

- HPE Edgeline EL300 Converged Edge System with no daughter card
- HPE Edgeline EL300 Converged Edge System with four port 1GB Ethernet with TSN support daughter card
- HPE Edgeline EL300 Converged Edge System with two port RS232/422/485 daughter card
- HPE Edgeline EL300 Converged Edge System with two port CAN Bus A/B/FD 2.0 daughter card
- HPE Edgeline EL300 Converged Edge System with 8-bit configurable GPIO daughter card

Front panel component
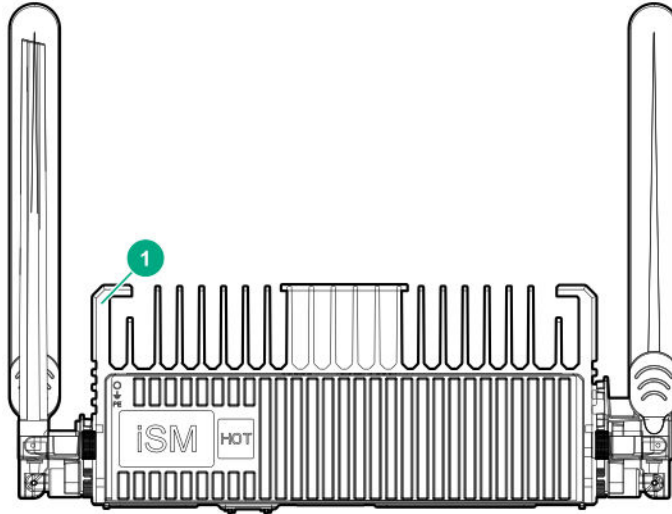
Item	Description
1	Top cover

Rear panel components

The HPE Edgeline EL300 Converged Edge System supports one daughter card installation. Depending on the daughter card installed in the system, the rear panel components for the system will change.

Rear panel configurations:

- **Rear panel components when no daughter card is installed**

- **Rear panel components when four port 1GB Ethernet with TSN support daughter card is installed**

- **Rear panel components when two port RS232/422/485 daughter card is installed**

- **Rear panel components when two port CAN Bus A/B/FD 2.0 daughter card is installed**

- **Rear panel components when 8-bit configurable GPIO daughter card is installed**

No daughter card configuration
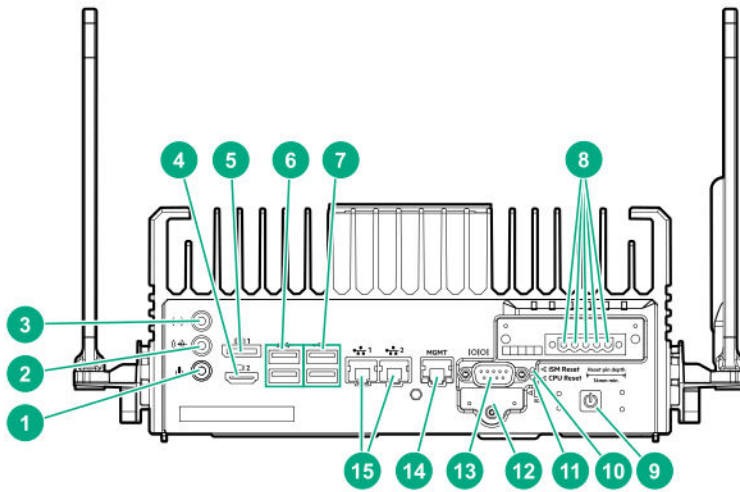
Item	Description
1	Mic
2	Line out
3	Line in
4	HDMI port
5	Display port
6	USB 3.0 ports
7	USB 2.0 ports
8	Power connectors
9	Power on button
10	Edgeline iSM Reset
11	CPU Reset
12	SD card slot
13	Serial port

Table Continued

Item	Description
14	RJ–45/Edgeline iSM /LAN management port
15	RJ–45 ports

Four port 1GB Ethernet with TSN support daughter card configuration
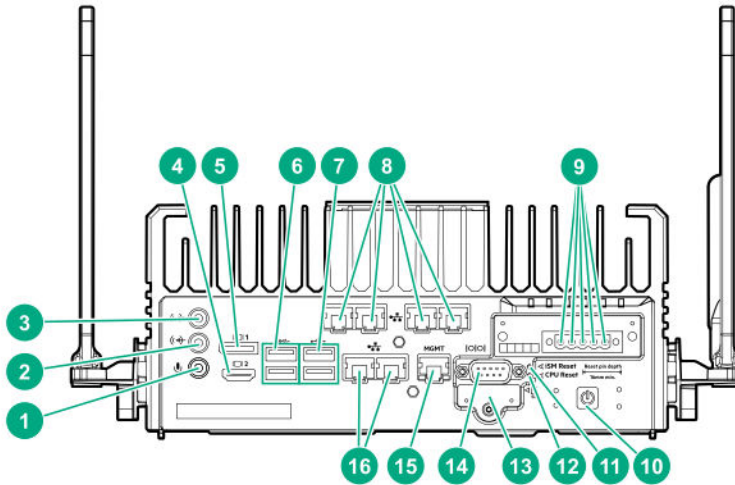
Item	Description
1	Mic
2	Line out
3	Line in
4	HDMI port
5	Display port
6	USB 3.0 ports
7	USB 2.0 ports
8	TSN daughter card ports
9	Power connectors
10	Power on button
11	Edgeline iSM Reset

Table Continued

Item	Description
12	CPU Reset
13	SD card slot
14	Serial port
15	RJ–45/Edgeline iSM /LAN management port
16	RJ–45 ports

Two port RS232/422/485 daughter card configuration
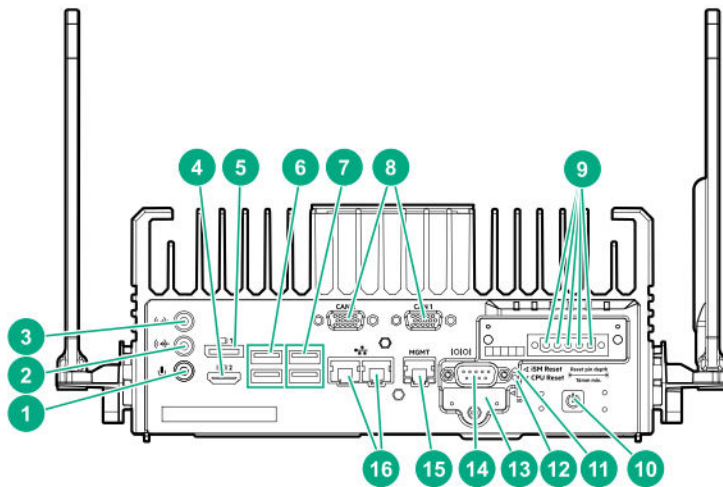
Item	Description
1	Mic
2	Line out
3	Line in
4	HDMI port
5	Display port
6	USB 3.0 ports
7	USB 2.0 ports
8	Serial daughter card ports

Table Continued

Item	Description
9	Power connectors
10	Power on button
11	Edgeline iSM Reset
12	CPU Reset
13	SD card slot
14	Serial port
15	RJ–45/Edgeline iSM /LAN management port
16	RJ–45 ports

Two port CAN Bus A/B/FD 2.0 daughter card configuration
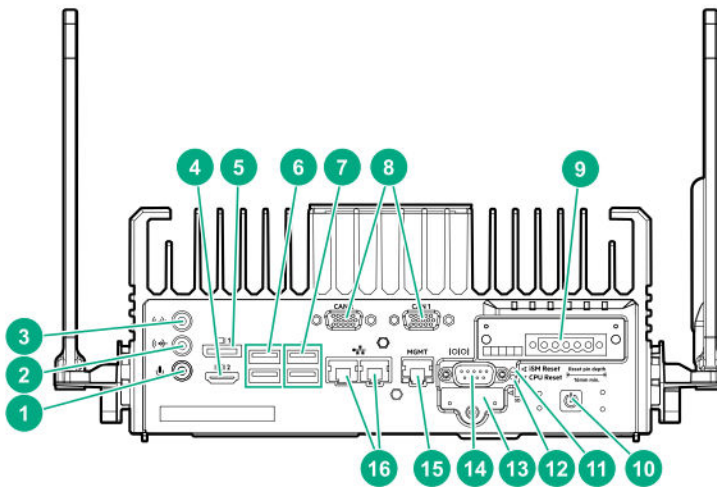
Item	Description
1	Mic
2	Line out
3	Line in
4	HDMI port
5	Display port

Table Continued

Item	Description
6	USB 3.0 ports
7	USB 2.0 ports
8	CAN BUS card ports
9	Power connector(s)
10	Power on button
11	Edgeline iSM Reset
12	CPU Reset
13	SD card slot
14	Serial port
15	RJ–45/Edgeline iSM /LAN management port
16	RJ–45 ports

8-bit configurable GPIO daughter card configuration
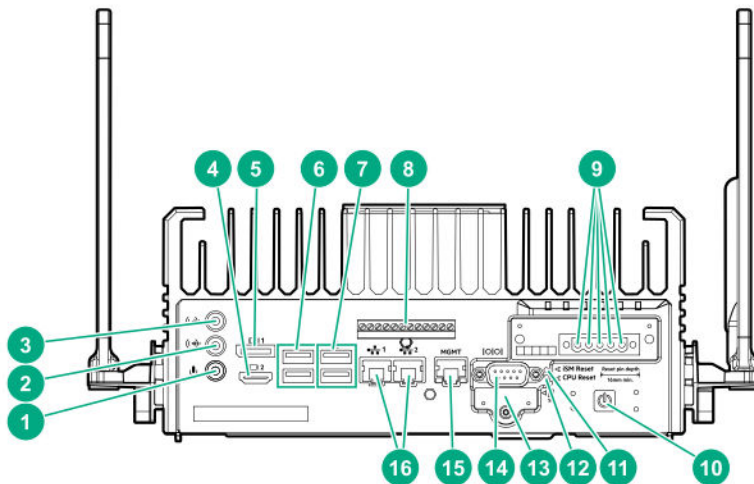
Item	Description
1	Mic
2	Line out

Table Continued

Item	Description
3	Line in
4	HDMI port
5	Display port
6	USB 3.0 ports
7	USB 2.0 ports
8	DIO daughter card port
9	Power connectors
10	Power on button
11	Edgeline iSM Reset
12	CPU Reset
13	SD card slot
14	Serial port
15	RJ–45/Edgeline iSM /LAN management port
16	RJ–45 ports

Rear panel LEDs
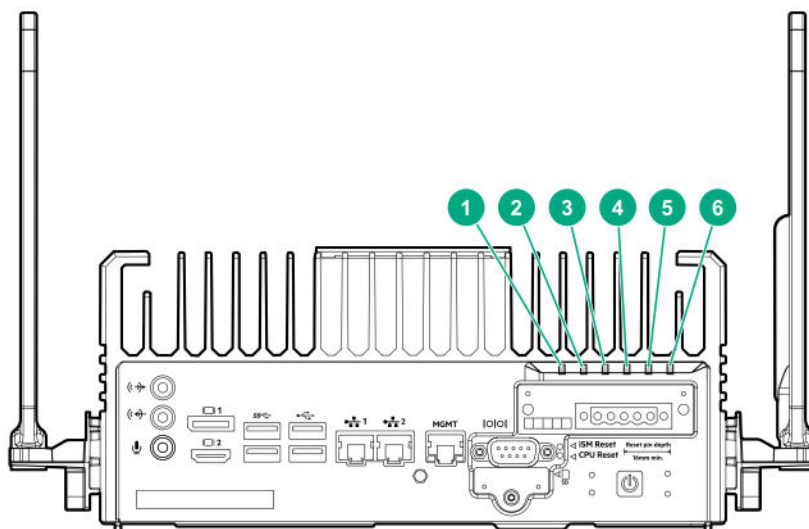
Item	LED	Status	Definition
1	Power supply	Solid green	Normal operation
		Amber	Standby mode
2	Health	Solid green	Normal operation
		Flashing green	Factory default reset in progress
		Red	Critical condition
3	UID	Solid blue	Activated
		Flashing blue	Active firmware update in progress or Remote Console in use
4	SSD1[1]	Solid green	Drive activity
		Off	No drive activity
5	SSD2[2]	Solid green	Drive activity
		Off	No drive activity
6	Wireless	White	Wireless network enabled

[1] This LED indicates activity for preinstalled M.2 SATA SSD.

[2] This LED indicates activity for PCIe NVMe SSD.

Antenna connector locations
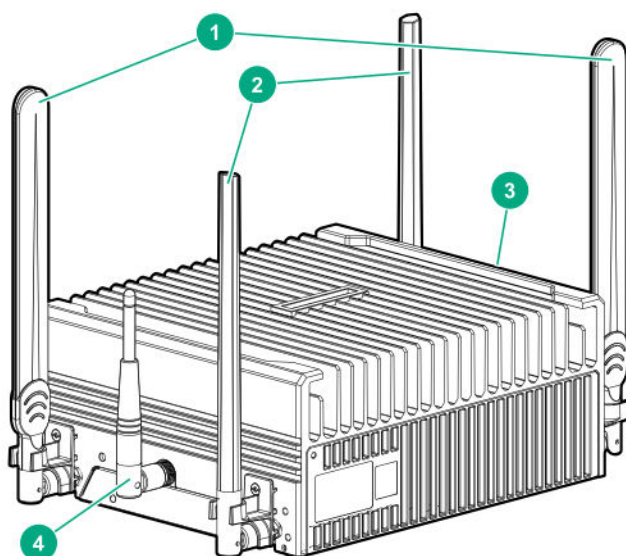
Item	Description
1	LTE antenna (optional)
2	WiFi antenna (optional)
3	Antenna port
4	iSM antenna (Management)

System installation site requirements

Before installing the system, verify that the following site requirements are met:

- **Space and airflow requirements**

- **Temperature requirements**

- **Power requirements**

HPE recommends that you install or position the system in a location with restricted access, where the access is secured and controlled. The users/technicians handling the system should be informed about the restrictions applied and precautions to be taken.

Space and airflow requirements

To allow for servicing and adequate airflow, observe the following space and airflow requirements:

Leave a minimum 20 cm (7.9 in) clearance space at the top, bottom, and front of the system.

⚠ **CAUTION:** To prevent improper cooling and damage to the equipment, do not cover the system.

Power requirements

Installation of this equipment must comply with local and regional electrical regulations governing the installation of information technology equipment by licensed electricians. This equipment is designed to operate in installations covered by NFPA 70, 1999 Edition (National Electric Code) and NFPA-75, 1992 (code for Protection of Electronic Computer/Data Processing Equipment). For electrical power ratings on options, see the product rating label or the user documentation supplied with that option.

Temperature requirements

To ensure continued safe and reliable equipment operation, install or position the system in a well-ventilated, climate-controlled environment.

Configuration	Temperature
EL300 system	0°C to 70°C (158°F) Operating temperature
EL300 system with power adapter installed	0°C to 55°C (131 °F) Operating temperature

Hardware options installation

This chapter provides detailed instructions on how to install hardware options.

For more information on supported options, see the product QuickSpecs on the website at:

http://www.hpe.com/info/qs

To view the warranty for your server and supported options, see **Warranty information**.

Power adapter option

The HPE Edgeline EL300 Converged Edge System supports the HPE EL300 80W 12 VDC power adapter option. This option is supported only when the system is installed with the HPE EL300 12V DC Transfer board.

Installing the power adapter option

Procedure

Connect the power adapter to the EL300 system.
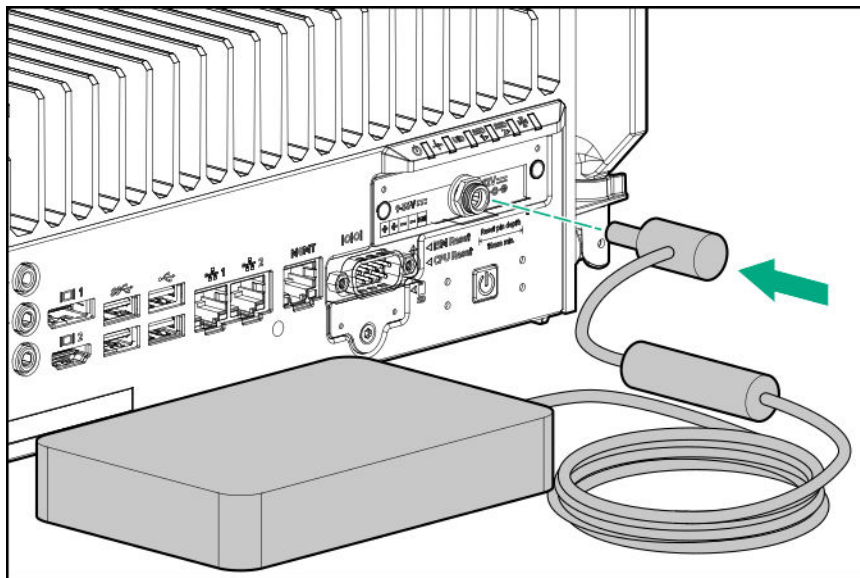
The installation is complete.

SD card option kit

The system supports installation of an 8 GB SD card.

Installing the SD card option

Prerequisites
Before you perform this procedure, make sure that you have the T-10 screwdriver available.

Procedure

1. Remove the SD port cover from the rear panel of the system.
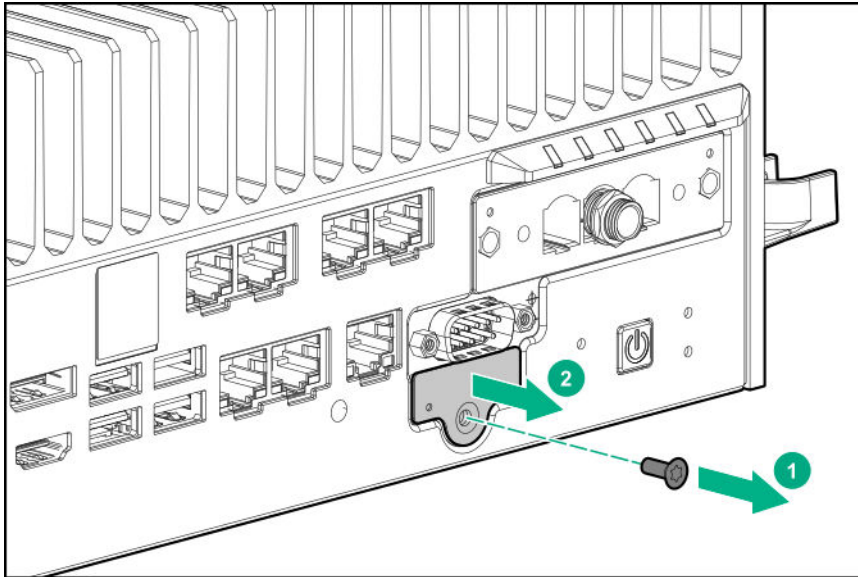
2. If installed, remove the serial port connector.

3. Insert the SD card in the slot.

   Make sure to insert the card with the label side downwards.
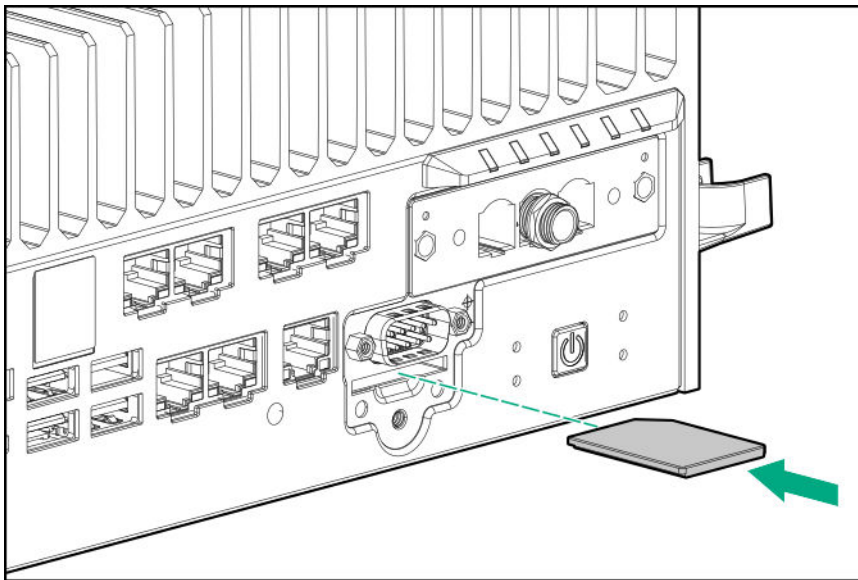
4. If removed, install the serial port connector

5. Reinstall the SD port cover.
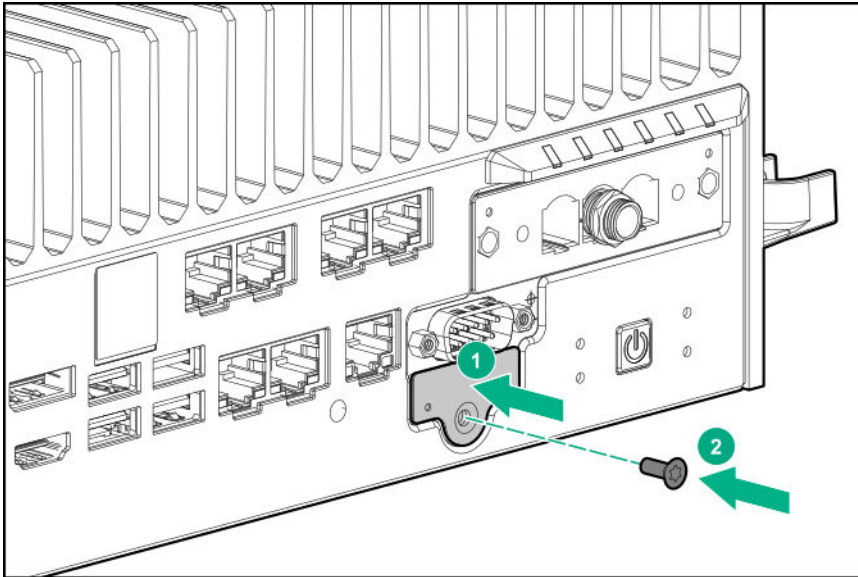
The installation is complete.

SFF to M.2 adapter option

The SFF to M.2 adapter option is required for installing an additional SATA M.2 SSD in the HPE Edgeline EL300 Converged Edge System.

Installing the SFF to M.2 adapter option

Prerequisites

Before you perform this procedure, make sure that you have the following items available:

- T-15 security screwdriver

- Phillips screwdriver

- M.2 SSD module

- Hex nut screwdriver

Procedure

1. **Power down the system**.

2. Remove all power:

    a. Disconnect the power cord from the power source.

    b. Disconnect the power cord from the system.

3. Depending on the surface the system is installed on, do one of the following:

    a. **Dismount the system from wall**.

    b. **Dismount the system from the rails**.

4. **Remove the security cover**.

5. **Remove the drive cage cover**.

6. Remove the standoff (Hex nut) screw securing the SATA cable and I2C cable.

   Retain the standoff (Hex nut) for installing the M.2 adapter board.
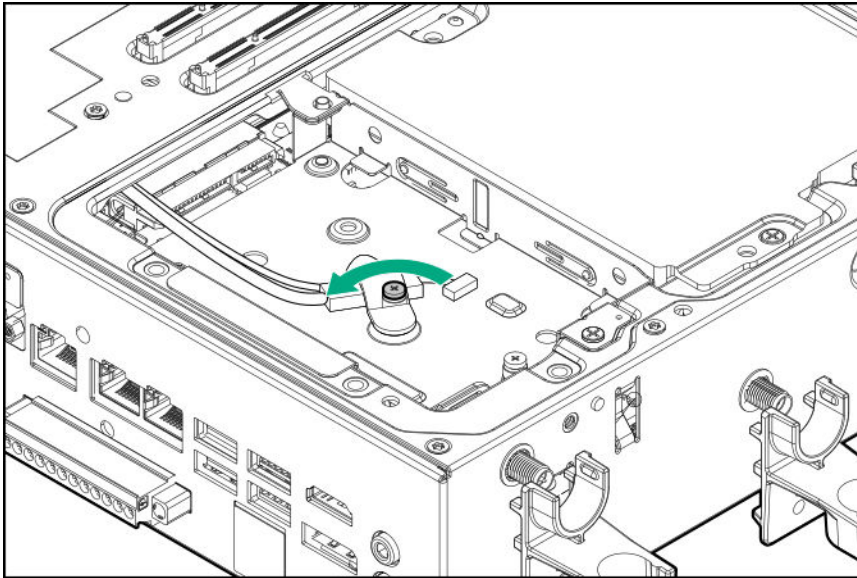
7. Remove the SFF drive cage.
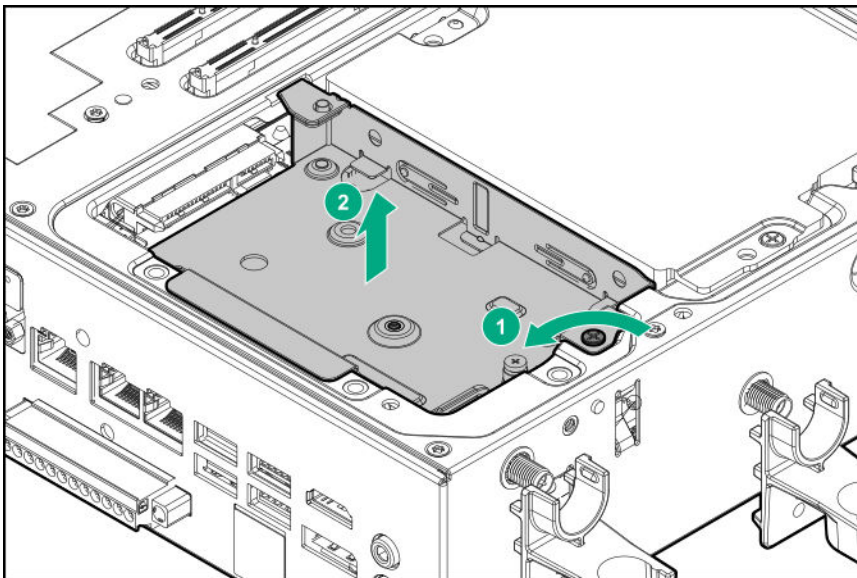
8. Install the M.2 adapter board on the drive cage.
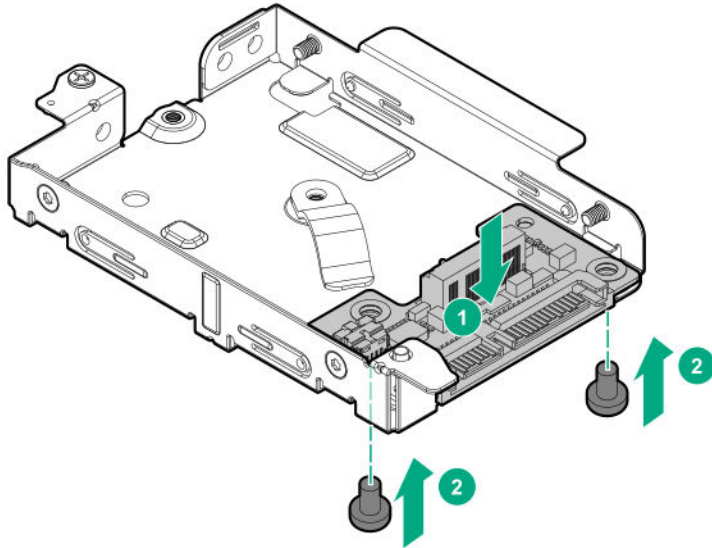
9. Connect the SATA cable and the I2C cable on the drive cage. Ensure that the I2C clip holder installed on the connector is in upward direction.
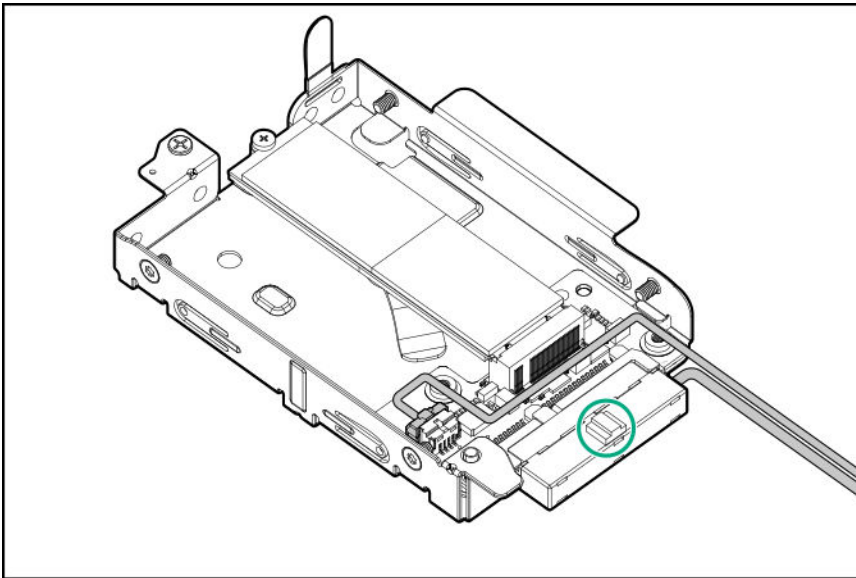
10. Install the stand off nut on the drive cage.
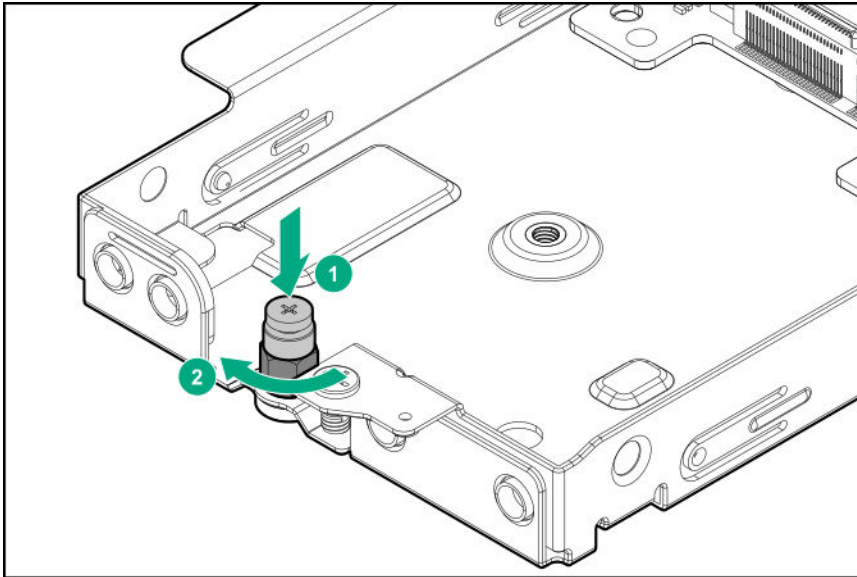
11. **Install the M.2 SSD module**.

12. **Install the drive cage cover**.

13. **Install the security cover**.

14. Do one of the following:

    - **Mount the system on wall**.

    - **Mount the system on rails**.

15. Connect the power cord to the system.

16. Connect the power cord to the power source.

17. **Power up the system**.

The installation is complete.

M.2 device option

The first M.2 device is preinstalled in the HPE Edgeline EL300 Converged Edge System. Additional M.2 devices can be installed using the SFF to M.2 adapter.

Installing a SATA M.2 SSD on the carrier board

Prerequisites

Before you perform this procedure, make sure that you have the following items available:

- M.2 SSD

- Hex nut screwdriver

- T-15 security screwdriver

- Phillips screwdriver

Procedure

1. **Power down the system**.

2. Remove all power:

   a. Disconnect the power cord from the power source.

   b. Disconnect the power cord from the system.

3. Depending on the surface the system is installed on, do one of the following:

   a. **Dismount the system from wall**.

   b. **Dismount the system from the rails**.

4. **Remove the security cover**.

5. **Remove the drive cage cover**.

6. **Remove the heat spreader.**

7. If present, remove the gap pad liner corresponding to the drive on the RF heat spreader.

8. Install the SATA M.2 SSD on the carrier board.
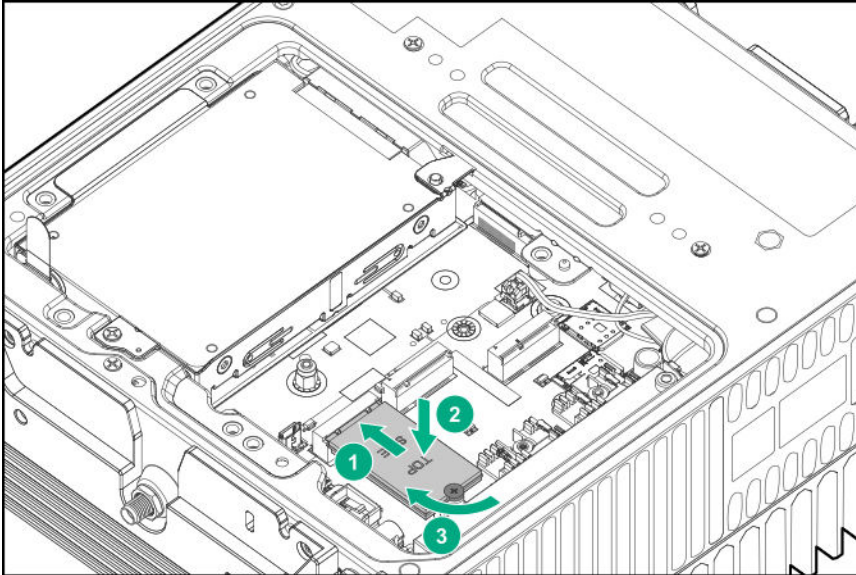
9. **Install the heat spreader**.

10. **Install the drive cage cover**.

11. **Install the security cover**.

12. Do one of the following:

    - **Mount the system on wall**.

    - **Mount the system on rails**.

13. Connect the power cord to the system.

14. Connect the power cord to the power source.

15. **Power up the system**.

The installation is complete.

Installing an M.2 SSD on the SFF to M.2 adapter

Prerequisites

Before you perform this procedure, make sure that you have the following items available:

- SATA M.2 SSD

- Hex nut screwdriver

- T-15 security screwdriver

- Phillips screwdriver

Procedure

1. **Power down the system**.

2. Remove all power:

    a. Disconnect the power cord from the power source.

    b. Disconnect the power cord from the system.

3. Depending on the surface the system is installed on, do one of the following:

    a. **Dismount the system from wall**.

    b. **Dismount the system from the rails**.

4. **Remove the security cover**.

5. **Remove the drive cage cover**.

6. **Install the M.2 adapter on the drive cage**.

7. Install the M.2 SSD on the drive cage and secure it with the standoff screw:

    a. Insert the SSD module into the slot.

    b. Carefully press the SSD down to horizontal direction.

    c. Install the M.2 mounting screw.
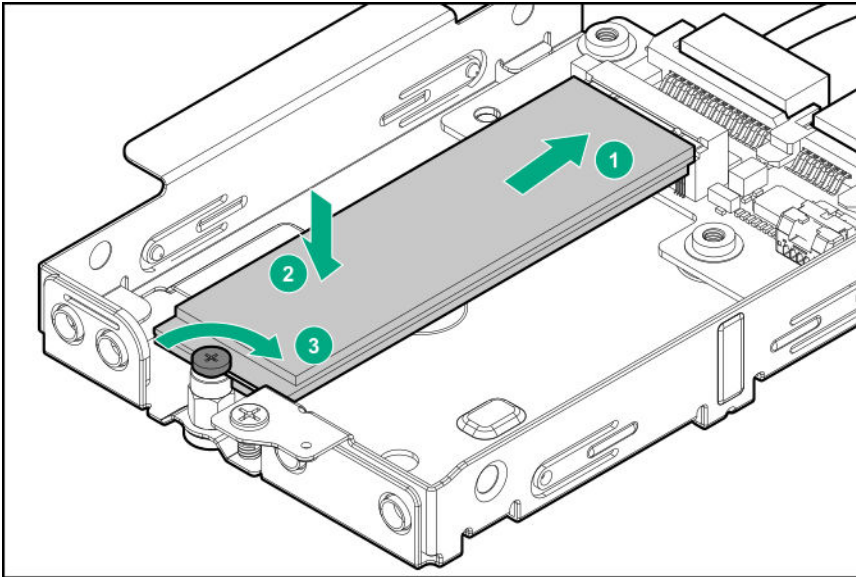
8. Install the drive cage:

   a. Insert the drive cage in the slot.

   b. Secure it with screw.
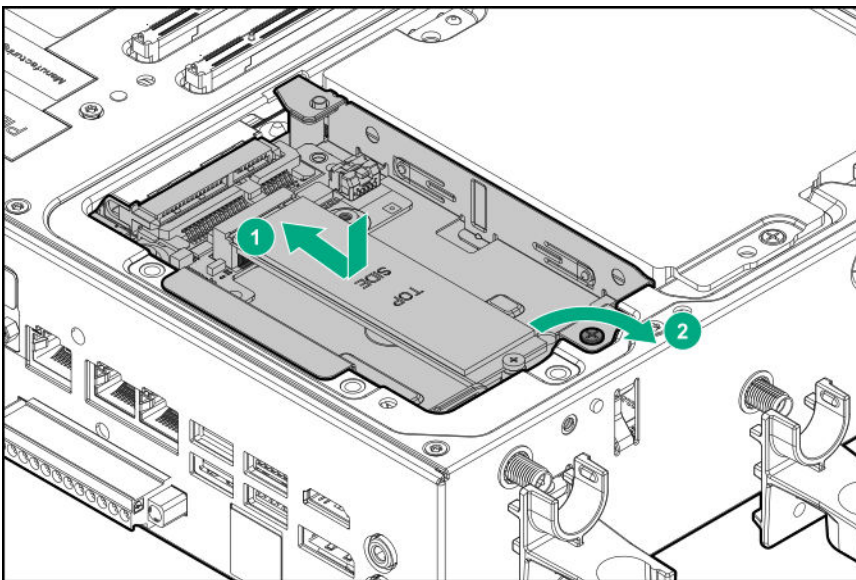
9. **Install the drive cage cover**.

   Make sure to remove the gap pad liner from the drive cage cover, before installing.

10. **Install the security cover**.

11. Do one of the following:

    • **Mount the system on wall**.

    • **Mount the system on rails**.

12. Connect the power cord to the system.

13. Connect the power cord to the power source.

14. **Power up the system**.

The installation is complete.

Installing PCIe NVMe SSD

Prerequisites

Before you perform this procedure, make sure that you have the following items available:

- NVMe M.2 SSD

- Hex nut screwdriver

- T-15 security screwdriver

- Phillips screwdriver

The M.2 NVMe slot on the carrier board can accommodate either a 22x80 or a 22x110 SSD.

Procedure

1. **Power down the system**.

2. Remove all power:

    a. Disconnect the power cord from the power source.

    b. Disconnect the power cord from the system.

3. Depending on the surface the system is installed on, do one of the following:

    a. **Dismount the system from wall**.

    b. **Dismount the system from the rails**.

4. **Remove the security cover**.

5. **Remove the drive cage cover**.

6. **Remove the RF Heat Spreader**.

7. If present, remove the gap pad liner corresponding to the drive on the RF heat spreader.

8. For installing the 22x80 NVMe drive:

    a. Ensure that the standoff nut is installed.
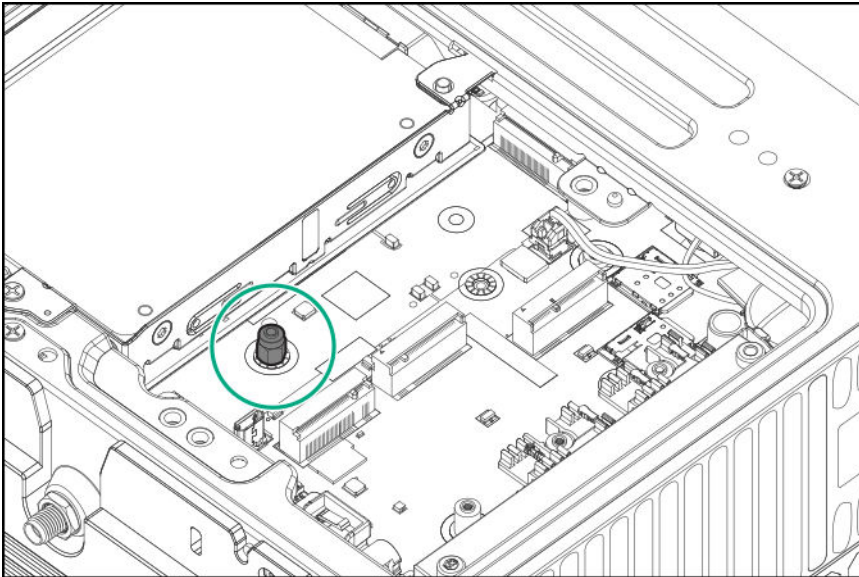
b. Insert the NVMe SSD into the slot.

c. Carefully press the SSD down to horizontal direction.

d. Install the M.2 mounting screw.
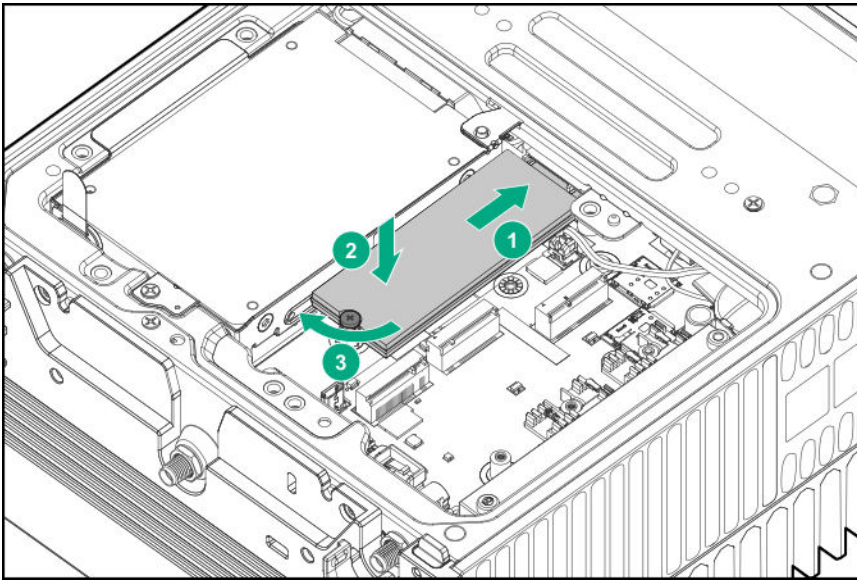
9. For installing 22x110 NVMe SSD, do the following:

a. Remove the standoff nut provided for the 22x80 drive.
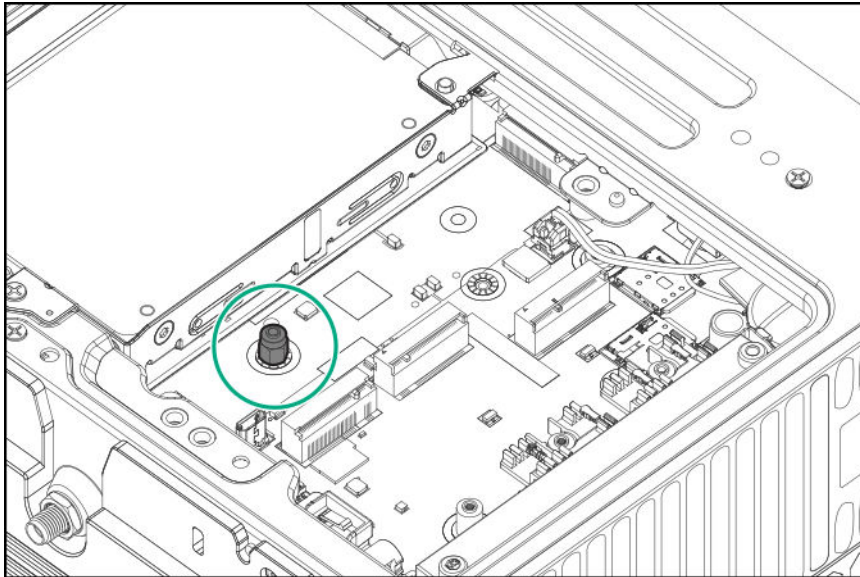
b. Insert the 22x110 NVMe SSD into the slot.

c. Carefully press the SSD down to horizontal direction.

d. Install the M.2 mounting screw.
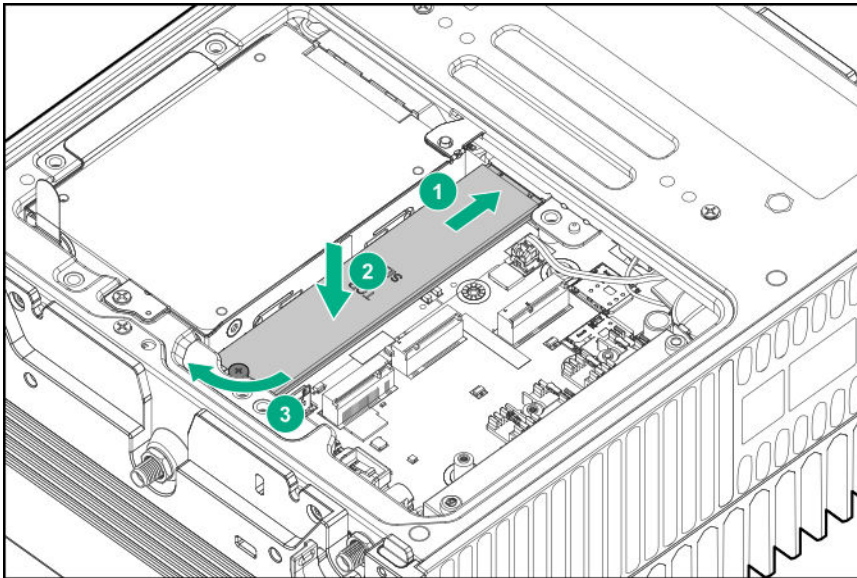
10. **Install the RF Heat Spreader** .

11. **Install the drive cage cover**.

12. **Install the security cover**.

13. Do one of the following:

   - **Mount the system on wall**.

   - **Mount the system on rails**.

14. Connect the power cord to the system.

15. Connect the power cord to the power source.

16. <u>**Power up the system**</u>.

The installation is complete.

Wireless network kit and antenna installation

The HPE Edgeline EL300 Converged Edge System supports remote management over wireless networks. This allows the system to be deployed anywhere that is covered by WiFi or cellular signal.

Install the network cards first, then install the associated antennas. The system includes attachment points for two types of antennas. Install one or both types depending on your configuration:

- **HPE EL Network WiFi option kit**

- **HPE EL Network LTE option kit**

HPE Edgeline WiFi/Bluetooth Intel AC9260 option kit

This option enables WiFi connectivity for the HPE Edgeline EL300 Converged Edge System. This option kit comprises of WiFi network card and WiFi antennas.

Installing the WiFi card

Prerequisites

Before you perform this procedure, make sure that you have the following items available:

- T-15 security screwdriver

- Phillips screwdriver

- Connector install/removal tool

Procedure

1. **Power down the system**.

2. Remove all power:

    a. Disconnect the power cord from the power source.

    b. Disconnect the power cord from the system.

3. Depending on the surface the system is installed on, do one of the following:

    a. **Dismount the system from wall**.

   b. **Dismount the system from the rails**.

4. **Remove the security cover**.

5. **Remove the drive cage cover**.

6. **Remove the heat spreader**.

7. Remove the gap pad liner for the WiFi card from the heat spreader.

8. Install the WiFi card.
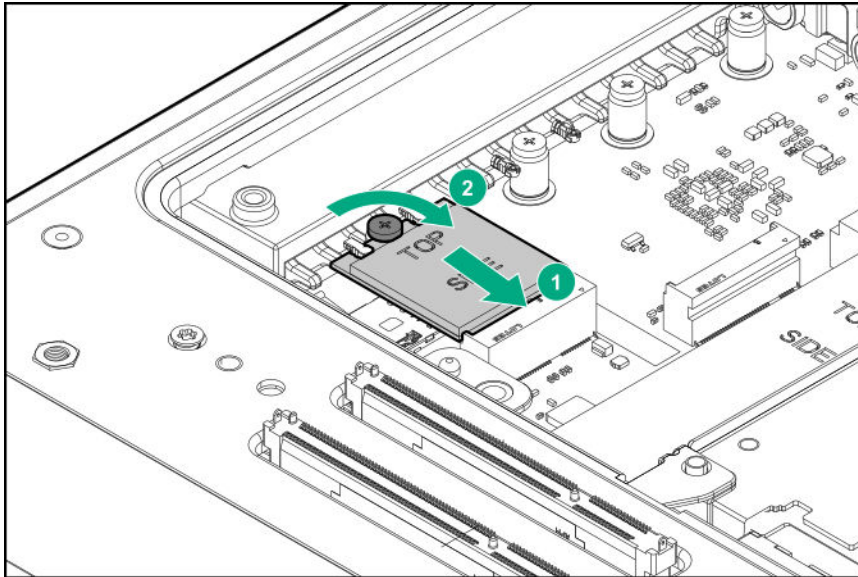
9. Connect the WiFi antenna cables.

   Use the connector/install removal tool when installing the antenna cables.

   ⚠ **CAUTION:** The connectors on the card are fragile, take utmost care when connecting the antenna cables.
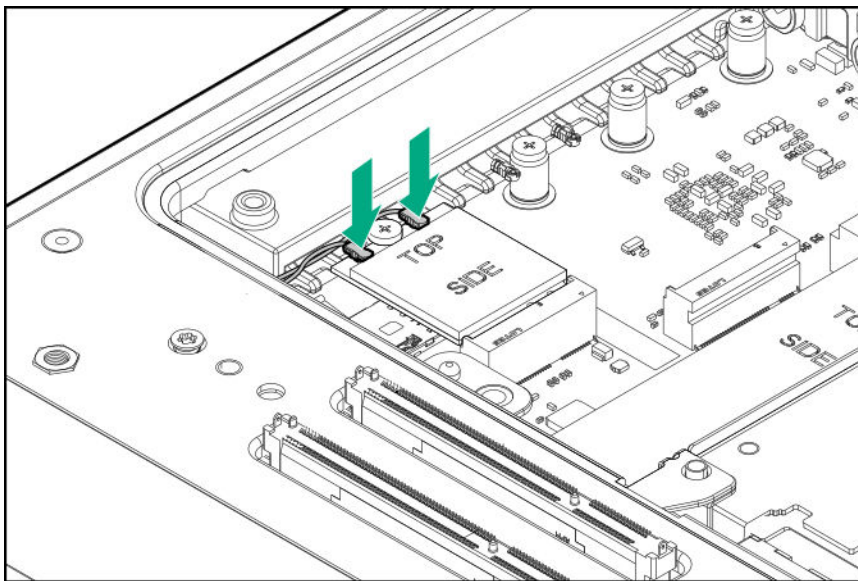
10. **Install the heat spreader**.

11. **Install the drive cage cover**.

12. **Install the security cover**.

13. **Install the preferred bracket option**.

14. **Install the WiFi antennas**.

15. Do one of the following:

- **Mount the system on wall**.

- **Mount the system on rails**.

16. Connect the power cord to the system.

17. Connect the power cord to the power source.

18. **Power up the system**.

The installation is complete.

Installing the WiFi antennas

Prerequisites

Before you perform this procedure:

- **Make sure that the bracket option is installed on the HPE Edgeline EL300 system**.

  .

- Make sure that you have the T-15 security screwdriver available.

Procedure

1. Locate the correct antenna slot.

2. Install the antenna.

   The antenna shown in the image might look different from the antenna for your system.

3. Install the antenna holders.

HPE Edgeline Wireless WAN 4G/LTE EM7565 Wide Temperature option kit

The HPE Edgeline EL300 Converged Edge System is designed to operate in remote or isolated locations. When installed in such environments, the LTE module supports remote management of the EL300 system.

This option enables 4G/LTE network connectivity for the HPE Edgeline EL300 system. The HPE Edgeline Wireless WAN 4G/LTE EM7565 Wide Temperature option kit comprises of LTE network card and LTE antennas.

Installing the LTE network card

Prerequisites

Before you perform this procedure, make sure that you have the following items available:

- T-15 security screwdriver

- Phillips screwdriver

Procedure

1. **Power down the system**.

2. Remove all power:

   a. Disconnect the power cord from the power source.

   b. Disconnect the power cord from the system.

3. Depending on the surface the system is installed on, do one of the following:

   a. **Dismount the system from wall**.

   b. **Dismount the system from the rails**.

4. **Remove the security cover**.

5. **Remove the drive cage cover**.

6. **Remove the heat spreader**.

7. Install the LTE card.
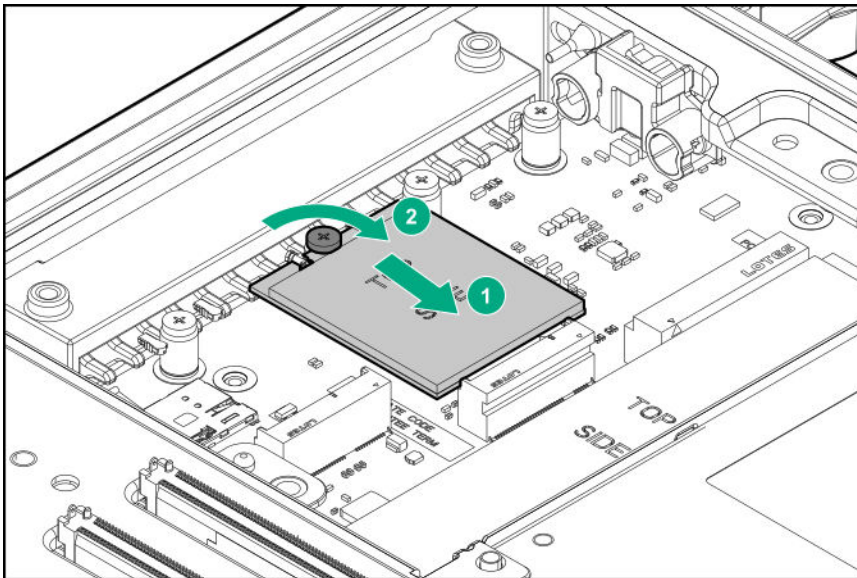
8. Connect the LTE antenna cables:

   Use the connector/install removal tool when installing the antenna cables.

   △ **CAUTION:** The connectors on the card are fragile, take utmost care when connecting the antenna cables.
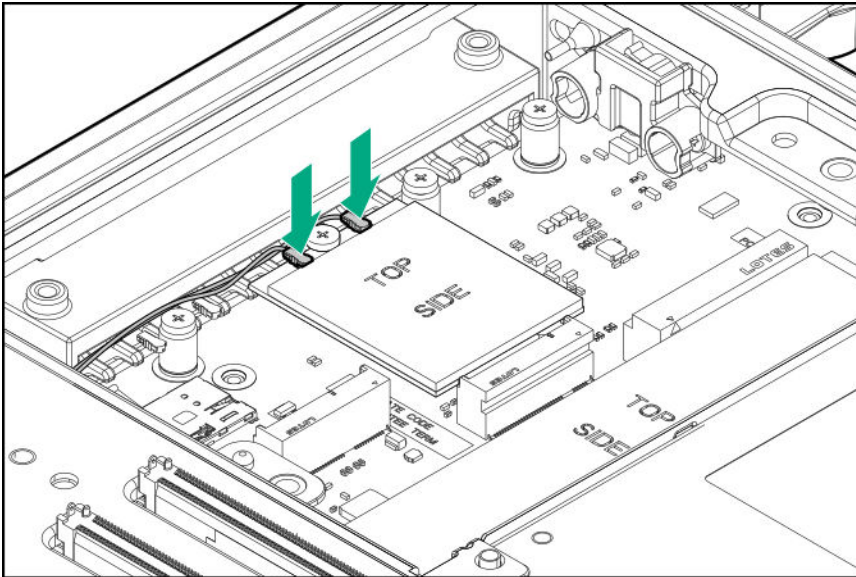
9. Optional: **Install the SIM card**.

10. Remove the LTE gap pad liner from the heat spreader.

11. **Install the heat spreader**.

12. **Install the drive cage cover**.

13. **Install the security cover**.

14. **Install the preferred bracket option**.

15. **Install the LTE antennas**.

16. Do one of the following:

    • **Mount the system on wall**.

    • **Mount the system on rails**.

17. Connect the power cord to the system.

18. Connect the power cord to the power source.

19. **Power up the system**.

The installation is complete.

Installing the SIM card

> ⓘ **IMPORTANT:** The SIM cards are supplied by your preferred mobile broadband provider, and cannot be ordered from HPE. The SIM cards must be nano-SIM form factor.

The EL300 system supports installation of two SIM cards. The first SIM card must be installed in the primary slot location only.
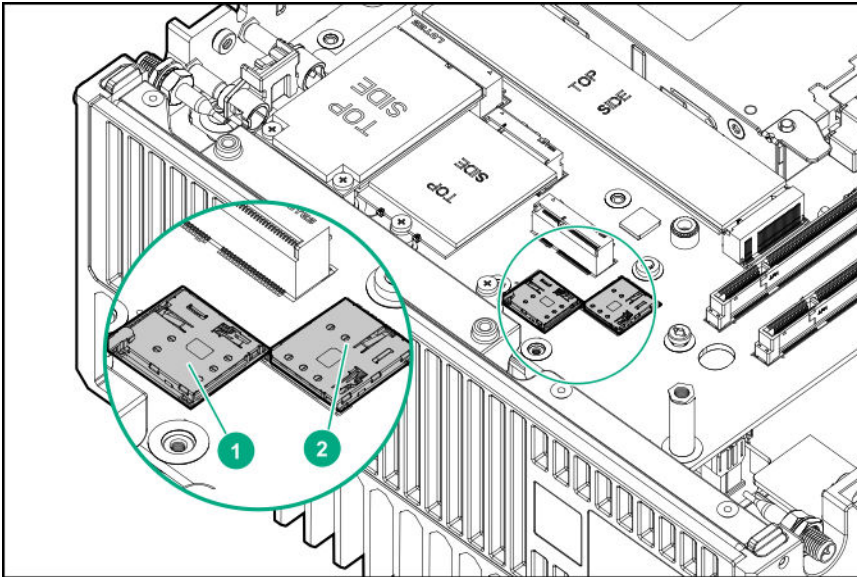
Item	Description
1	Primary slot
2	Secondary slot

Prerequisites

Before performing this procedure:

Make sure that the LTE network card is installed.

Procedure

1. Install the SIM card in primary slot location.
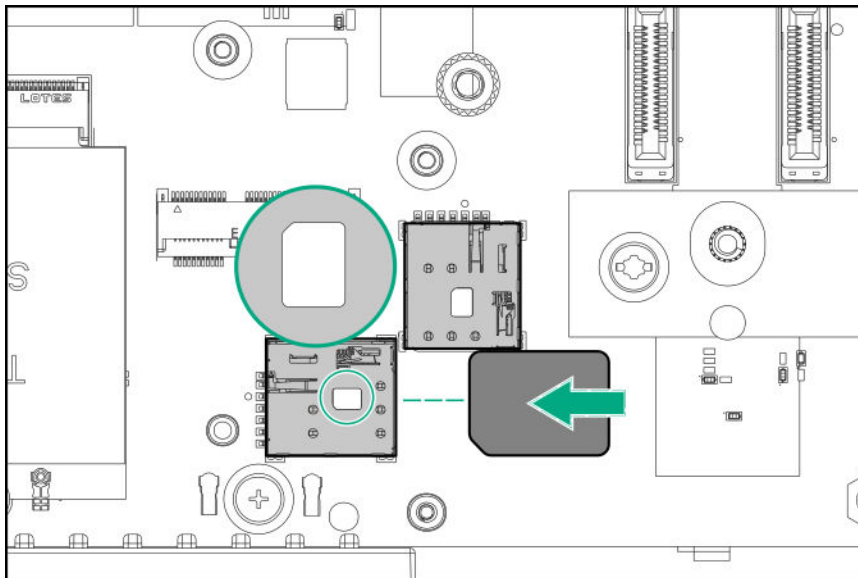
2. Optional: Install a secondary SIM card.

3. **Install the heat spreader**.

   Make sure to remove the gap pad liner from the heat spreader.

4. **Install the drive cage cover**.

5. **Install the security cover**.

6. **Install the LTE antennas**.

7. Do one of the following:

   • **Mount the system on wall**.

   • **Mount the system on rails**.

8. Connect the power cord to the system.

9. Connect the power cord to the power source.

10. **Power up the system**.

Installing the LTE antennas

Prerequisites

Before you perform this procedure:

• **Make sure that the bracket option is installed on the HPE Edgeline EL300 system**.

   .

• Make sure that you have the T-15 security screwdriver available.

Procedure

1. Locate the correct antenna slot.
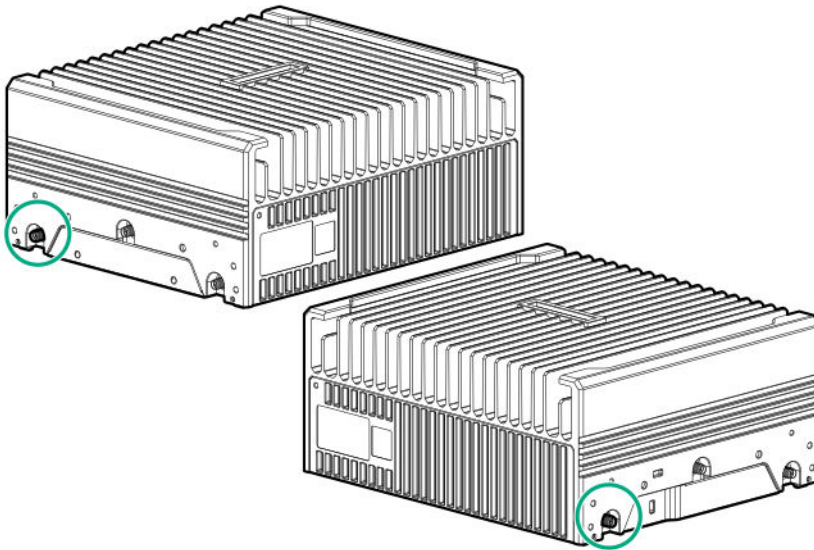
2. Install the antenna.

The antenna shown in the image might look different from the antenna for your system.
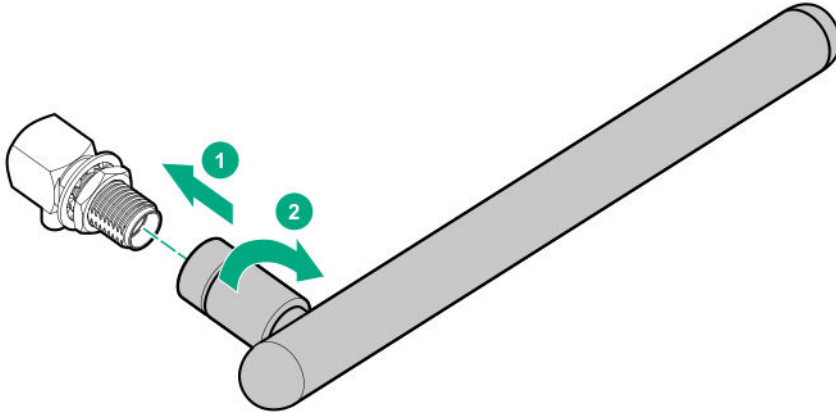
3. Install the antenna holders.
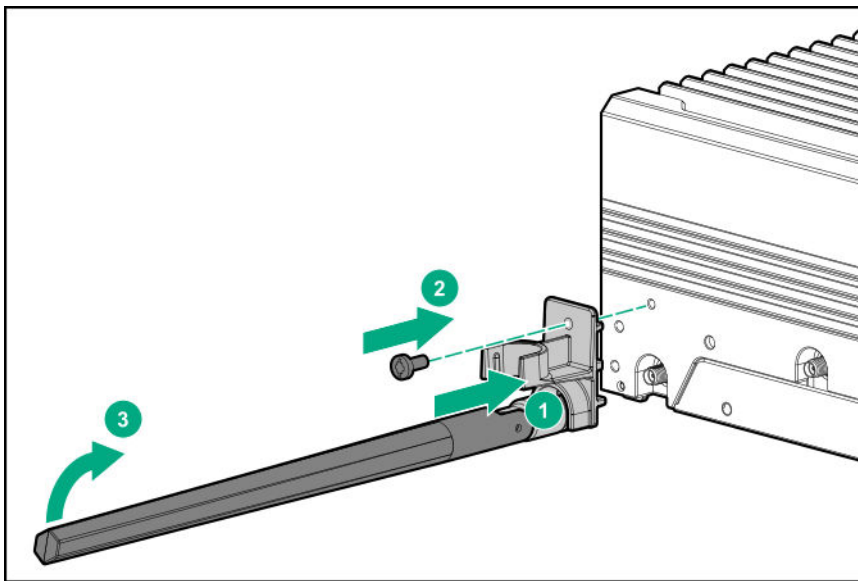
System mount options
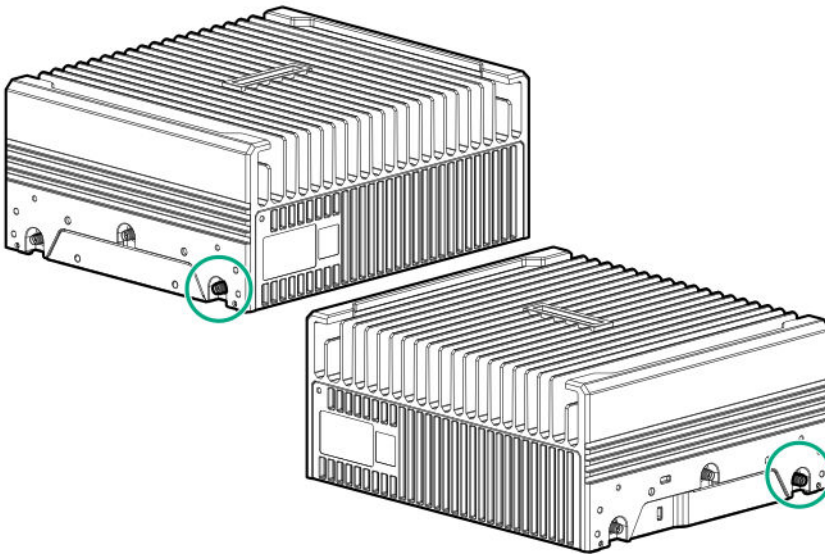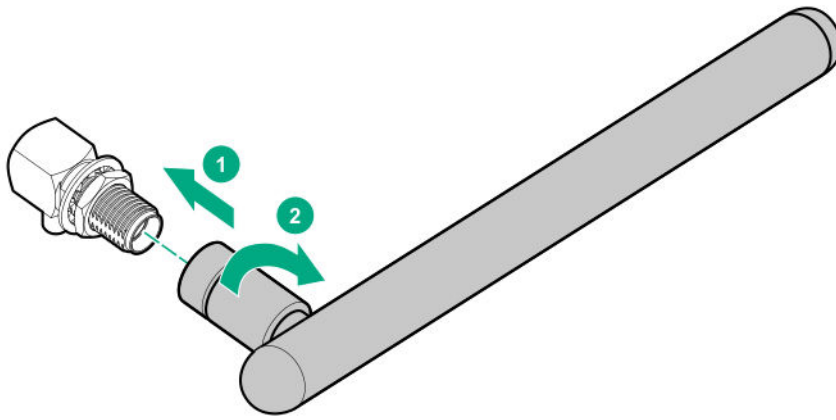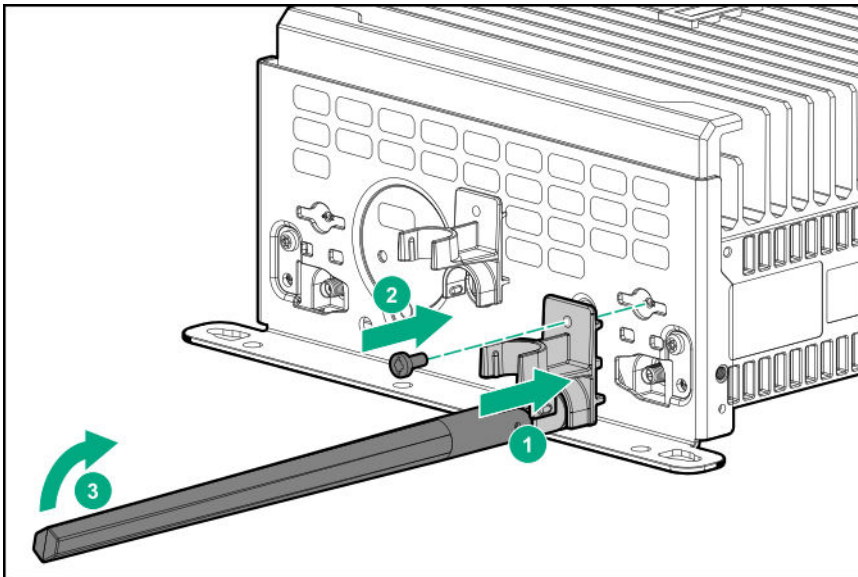
The HPE Edgeline EL300 Converged Edge System requires to be mounted on a vertical surface. There are two mounting options available for the system:

- **Wall mounting option**

- **DIN rail mounting option**

The EL300 system also supports bracket options that assist in the mounting of the system.

This chapter provides instructions for mounting the HPE Edgeline EL300 Converged Edge System.

Bracket option kits

The EL300 system supports two bracket option kits:

- **Base only bracket option**

- **Standard bracket option**

Depending on the hardware configuration selected, any one of the bracket options can be installed on the HPE Edgeline EL300 Converged Edge System.

Base only bracket option kit

The base only bracket option offers installation support for the EL300 base system only. This bracket option does not support expansion unit installation.

The following components are available with the option kit:

- Base bracket panels (2)

- T-15 screws

- Cable management bracket

- Reusable cable ties and Velcro

Installing the base only bracket option

Prerequisites
Before you perform this procedure, make sure that you have the T-15 security screwdriver available.

Procedure

1. Place the system on a flat level surface.

2. Attach the brackets on the system:

    a. Place the brackets on the side of the system.

    b. Secure the brackets with T-15 screws.
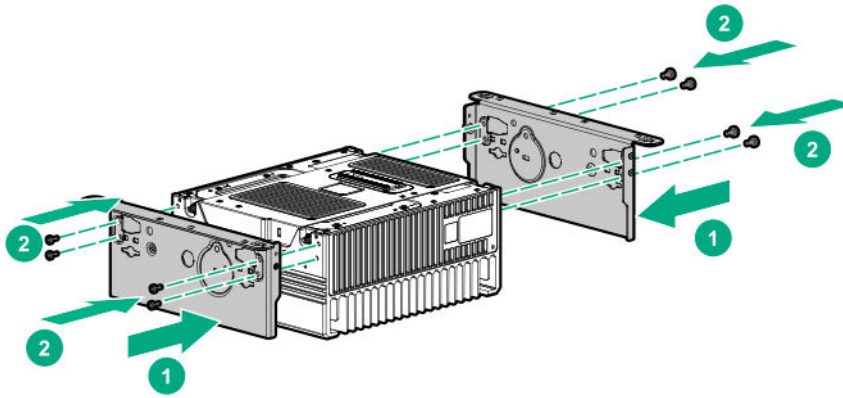
3. Install the cable management bracket.
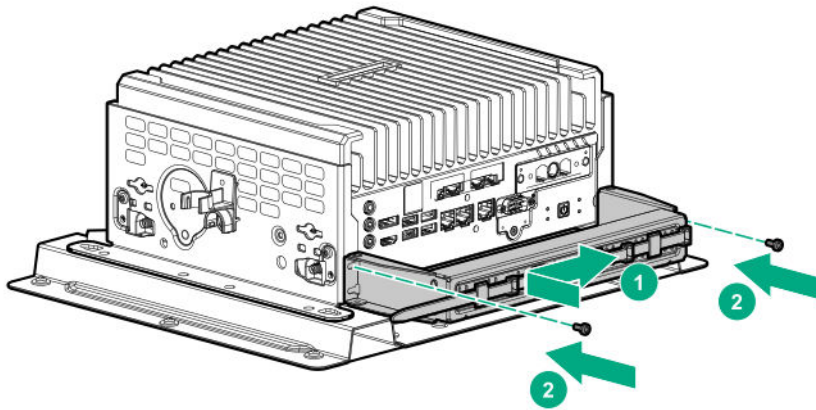
The installation is complete.

Standard bracket option kit

The HPE Edgeline EL300 Converged Edge System can be connected to additional expansion units for increased functionality and connectivity options. The standard bracket option is installed when additional expansion board support is required.

The standard bracket option can be installed to support the following hardware configurations:

- HPE Edgeline EL300 base unit

- HPE Edgeline EL300 base unit + 1 expansion unit

- HPE Edgeline EL300 base unit + 2 expansion units

The following components are available with the option kit:

- Standard bracket panels (2)

- T-15 screws

- Bracket handles

- Cable management bracket

- Reusable cable ties and velcro

Installing the standard bracket option

Before you perform this procedure, make sure that you have the T-15 security screwdriver available.

Procedure

1. Attach the bracket handles to the bracket panels.
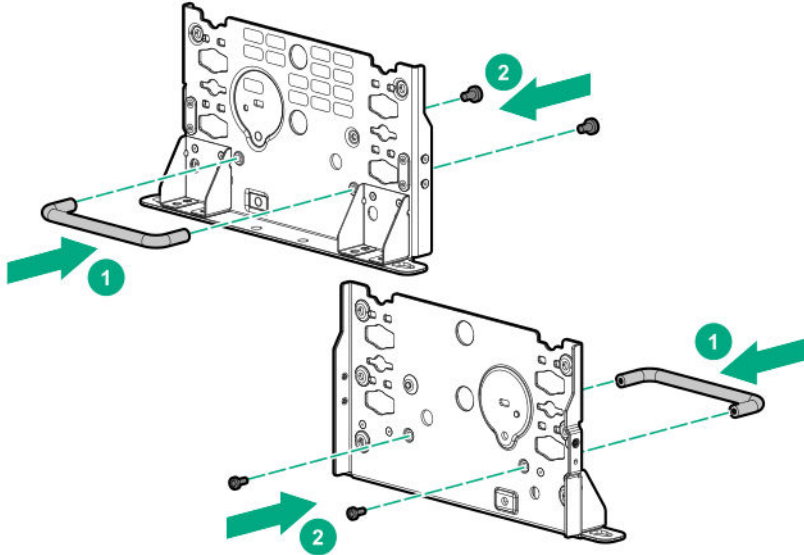
2. Place the system on a flat level surface.

3. Attach the brackets on the system:

   a. Place the brackets on the side of the system.

   b. Secure the brackets with T-15 screws.
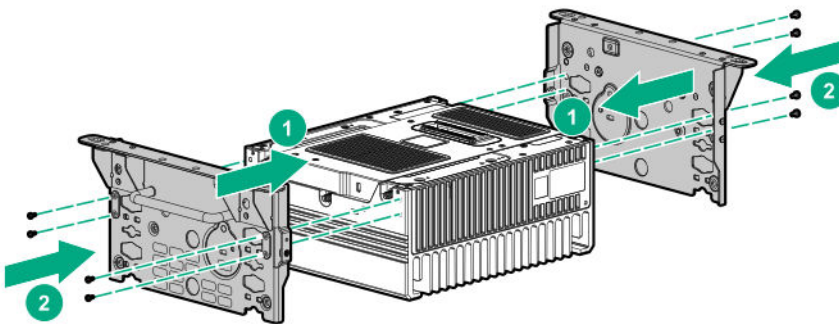
4. Install the cable management bracket.
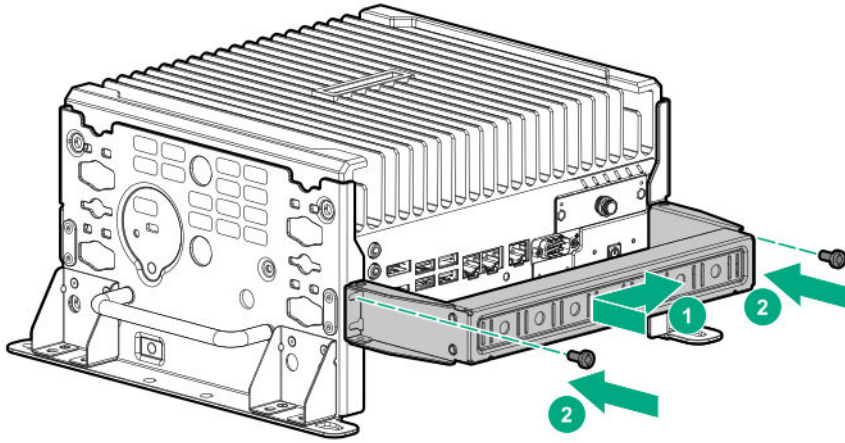
The installation is complete.

Wall mounting option kit

The wall mounting option kit is required when mounting the system on a wall.

Installing the wall mounting kit

Prerequisites

Before you perform this procedure:

- **Make sure that the preferred bracket option is installed on the HPE Edgeline EL300 system**.

- Make sure that you have the following items available:

  ◦ Combo screws and wall anchors

  ◦ Phillips screwdriver

  ◦ Drilling machine

  ◦ 5/6 inch drill bit

Procedure

1. **For hollow wall** - Install the wall mounting base panel:

   a. Identify the location for installing the mounting panel.

   b. Place the wall mount base panel on the selected position on the wall and mark the screw locations.

      NOTE: Align minimum one column, out of the three middle panels, to the internal wall stud.

   c. Drill pilot holes on the marked screw locations and install the wall anchors.

      Wall anchors are not required for holes aligned on the internal wall stud.

   d. Install the top two screws halfway and hang the base panel.

   e. Secure the base panel by tightening all the screws.
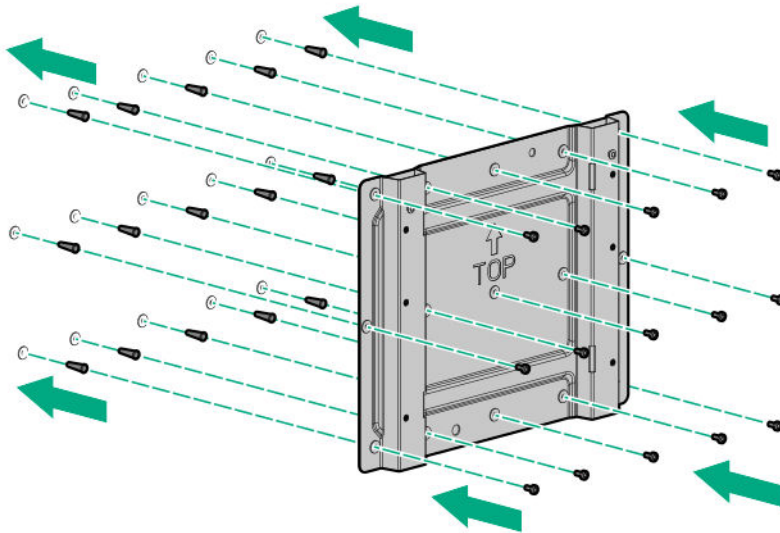
2. **For brick and concrete wall** - Install the wall mounting base panel:

   a. Identify the location for installing the mounting panel.

   b. Place the wall mount base panel on the selected location one the wall and mark the position of all the screw mounting holes.

   c. Drill pilot holes on the marked screw locations and install the wall anchors.

   d. Install the top two screws halfway and hang the wall mount

   e. Secure the base panel by tightening all the screws.
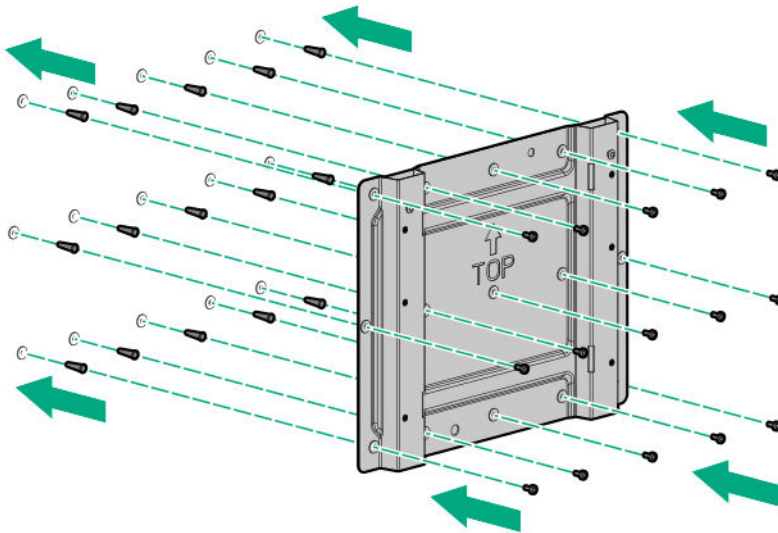
3. Install the system on the wall mount base panel:

   a. Align the system mounted on brackets with the spools of the base panel.

   b. Secure the system with screws.
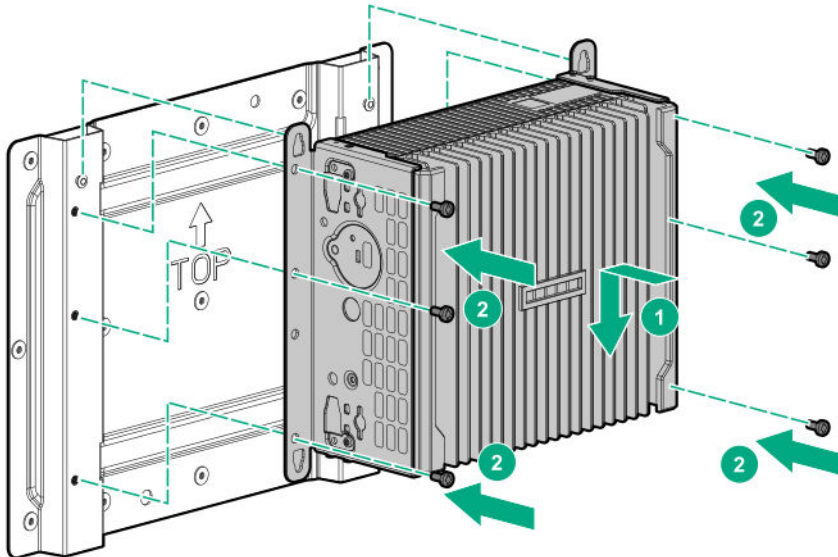
The installation is complete.

DIN rail mounting panel option kit

The DIN rail mounting panel option is required when mounting the system on a DIN rail.

Installing the rail mounting kit

Prerequisites

Before you perform this procedure:

- **Make sure that the preferred bracket option is installed on the HPE Edgeline EL300 system**.

- Make sure that you have the T-15 security screwdriver available.

Procedure

1. Attach the DIN rail clips to the DIN mounting panel:

    a. Align the rail clips to the DIN panel.

    b. Install the screws.

       For two-rail option loosely install the clips for the lower rail.

    - Single rail
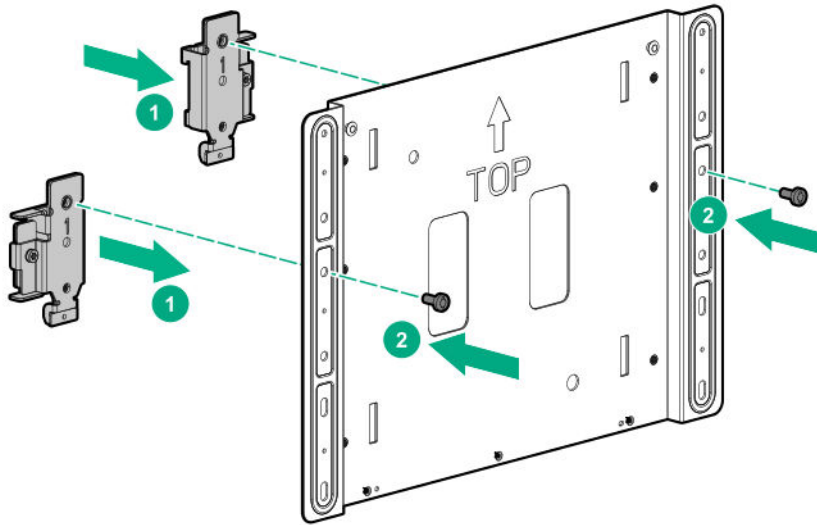
- Dual rails
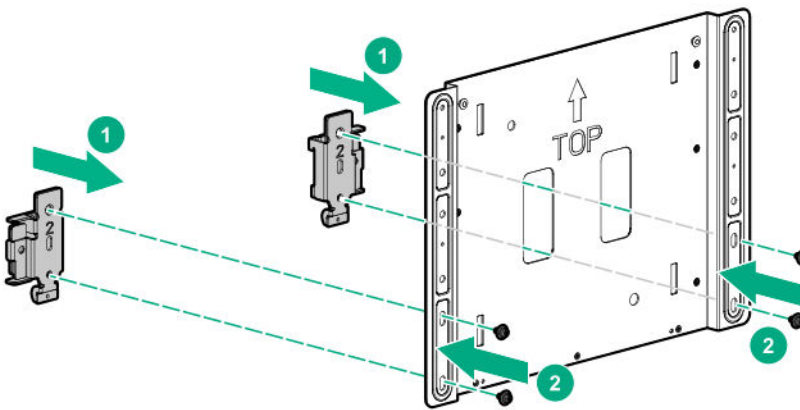
2. Install the mounting panel on the rails:

   a. Slide up the base of the rail clip.

   b. Install the bottom screw.

   When installing two rails, the distance between the rails should be 178.8mm.

- Single rail
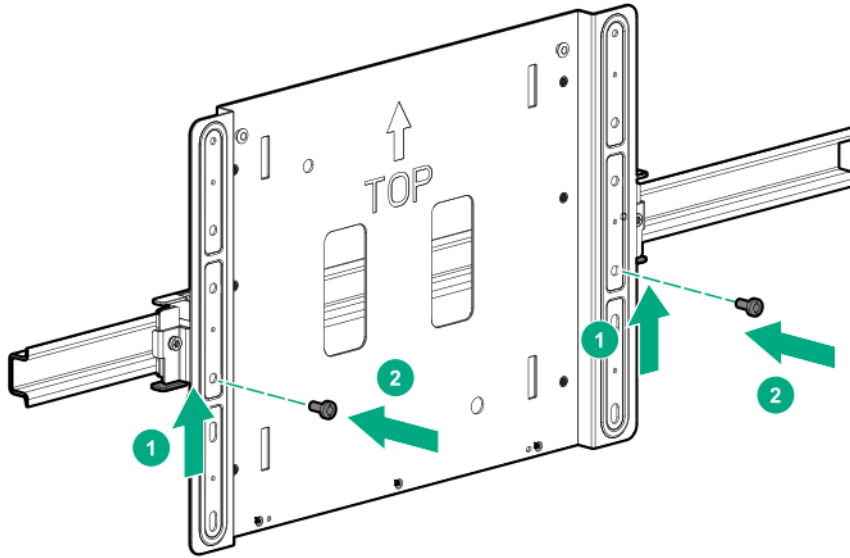
- Dual rails
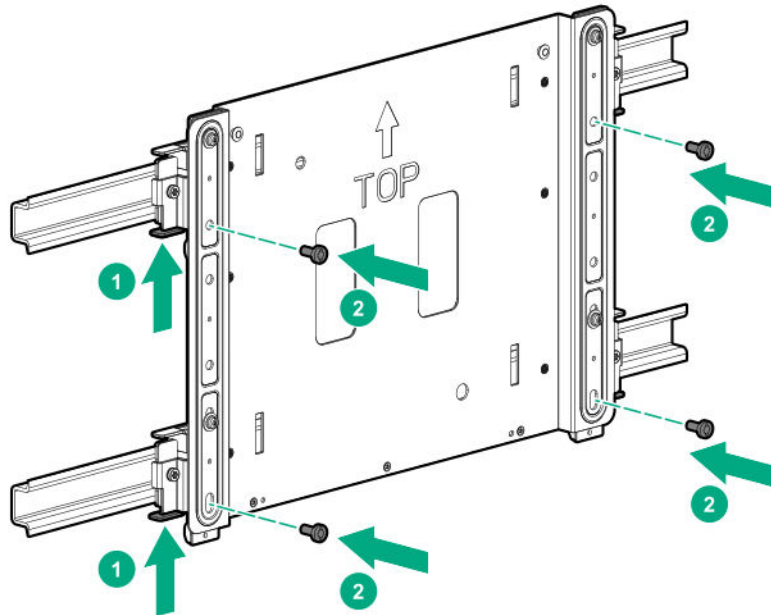
3. Secure the rails installed by tightening the screws on the rail clips.

- Single rail
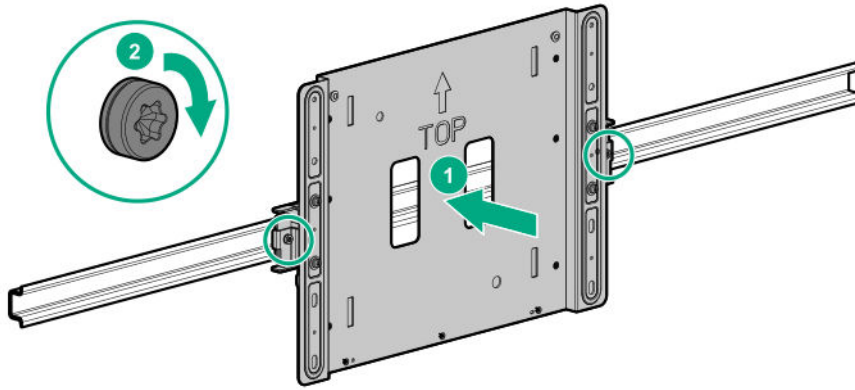
- Dual rails
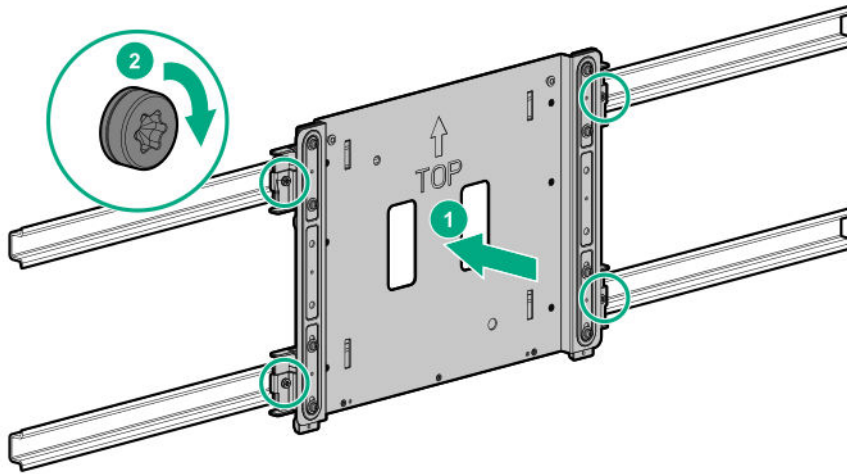
4. Install the system on the rail-mounted panel:

   a. Align the system mounted on brackets with the spools of the base panel.

   b. Secure the system with screws.
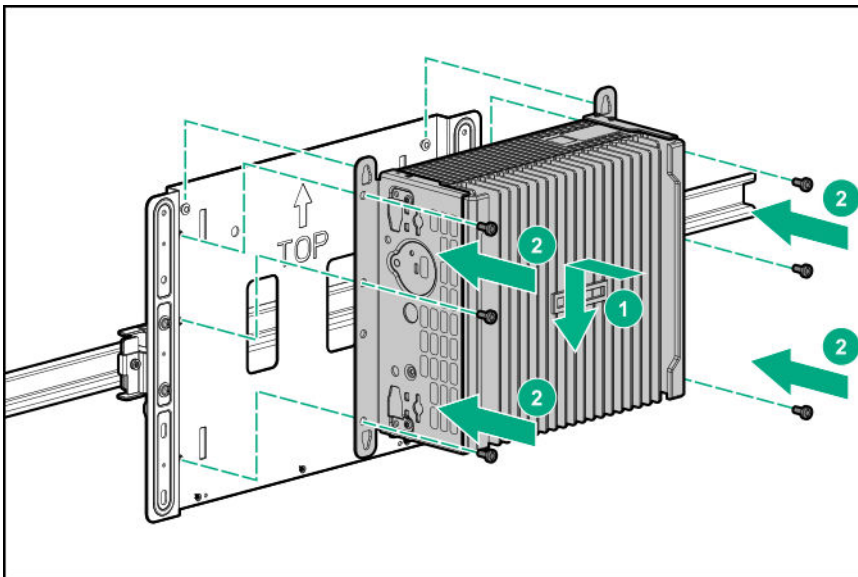
The installation is complete.

Associated hardware procedures

This chapter describes the hardware operations carried out prior to and after installing or removing a hardware option, or performing system maintenance or troubleshooting.

Before performing these hardware operations, review and observe system warnings and cautions.

Installing the power supply

Procedure

1. Connect the power cord to the power connector at the rear of the system.
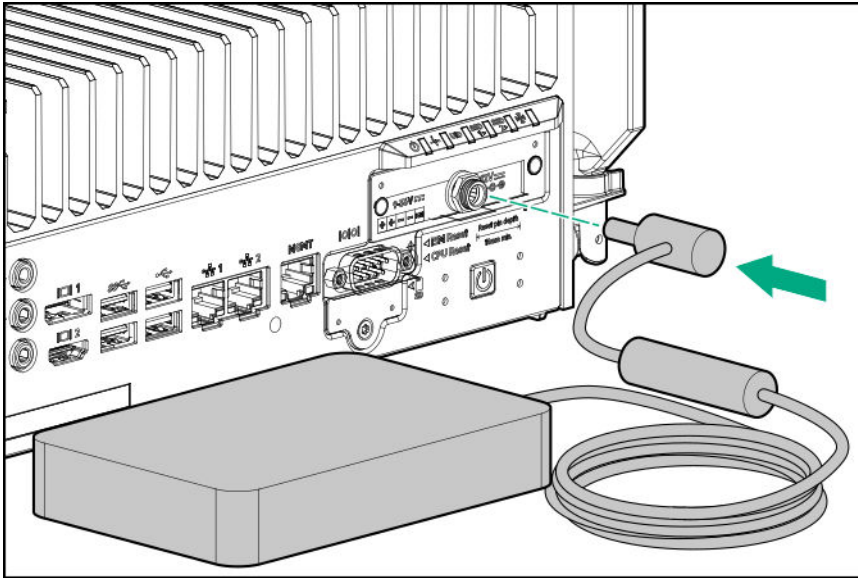
2. **Power up the system**.

Powering up the system

If the system is connected to a power source, it powers up automatically. It needs to be powered up only after a manual shutdown or after autopower off.

To power up the system, press the Power On/Standby button.

Powering down the system

Before powering down the system for any upgrade or maintenance procedures, you must back up critical system data and programs.

Use one of the following methods to power down the system:

- Press and release the Power On/Standby button.

  This method initiates a controlled shutdown of applications and the OS before the system enters standby mode.

- Press and hold the Power On/Standby button for more than 4 seconds to force the system to power down.

This method forces the system to power down without properly exiting applications and the OS. If an application stops responding, you can use this method to force a shutdown.

Before proceeding, you must ensure that the system is in standby mode by verifying that the system power LED is off.

Mounting the system

The following kits are available to mount your system:

- **Wall mounting kit**

- **Rail mounting kit**

Before mounting the system, make sure that you do the following:

- Read the site requirements for the system:

  System installation site requirements

- Read the safety and compliance information on the HPE website:

  http://www.hpe.com/support/safety-compliance-enterpriseproducts

Dismounting the system

Depending on the selected mounting option:

- **Dismount the system from a wall mount**

- **Dismount the system from a rail mount**

Dismount the system from a wall mount panel

Prerequisites

Before you perform this procedure, make sure that you have the T-15 security screwdriver available.

Procedure

1. Power down the system.

2. Disconnect all cables connected to the system.

3. Remove the system from the wall mounting panel.
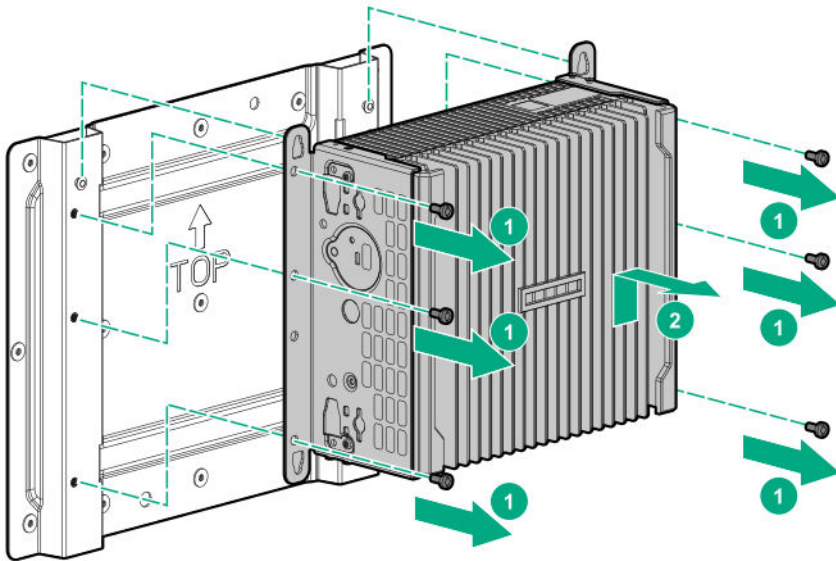
Dismount the system from a rail mount panel

Prerequisites

Before you perform this procedure, make sure that you have the T-15 security screwdriver available.

Procedure

1. Power down the system.

2. Disconnect all cables connected to the system.

3. Remove the system from the rail-mounted base panel.
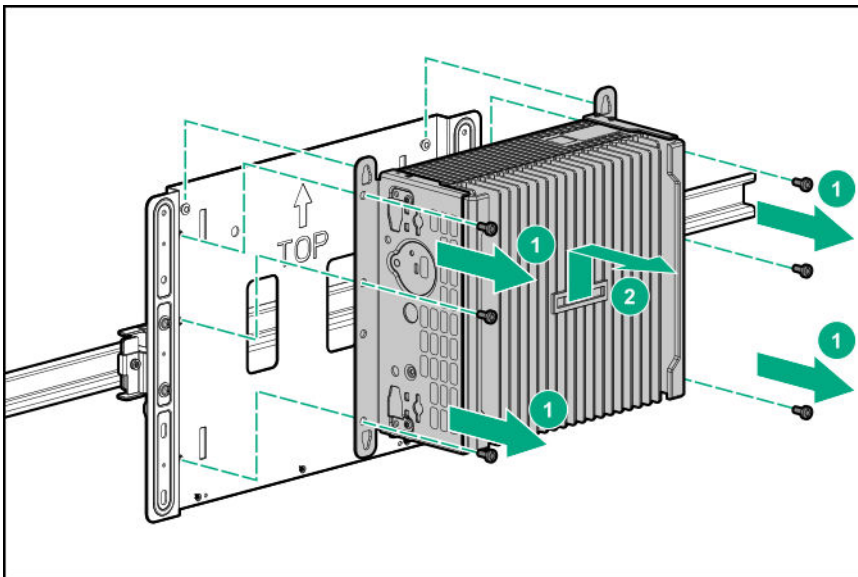
Removing the antenna

Procedure

1. **Power down the system**.

2. Remove all power :

   a. Disconnect the power cord from the power source.

   b. Disconnect the power cord from the system.

3. Depending on the surface the system is installed on, do one of the following:

   a. **Dismount the system from wall**.

   b. **Dismount the system from the rails**.

4. Place the system on a flat, level surface.

5. **Locate the correct antenna slot**.

6. Remove the antenna.

   The antenna shown in the image may be different from your system.
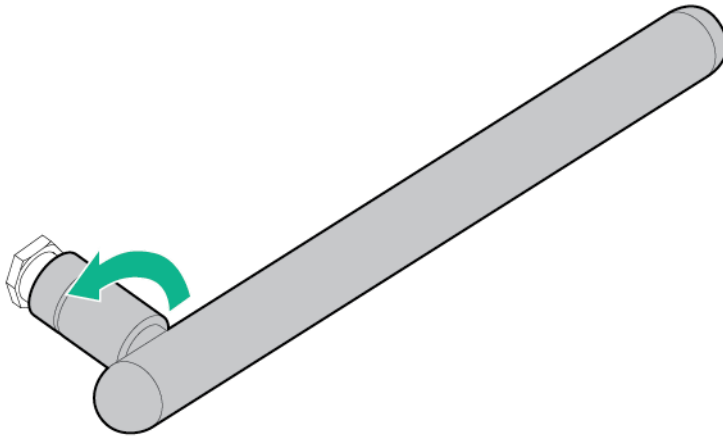
Removing the brackets

Prerequisites
Before performing this procedure, make sure that you have the T-15 security screwdriver available.

Procedure

1. **Power down the system**.

2. Remove all power:

a. Disconnect the power cord from the power source.

b. Disconnect the power cord from the system.

3. Depending on the surface the system is installed on, do one of the following:

a. **Dismount the system from wall**.

b. **Dismount the system from the rails**.

4. Remove all the cables routed through the cable management bracket.

5. Place the system on a flat, level surface.

6. Remove the cable management arm.
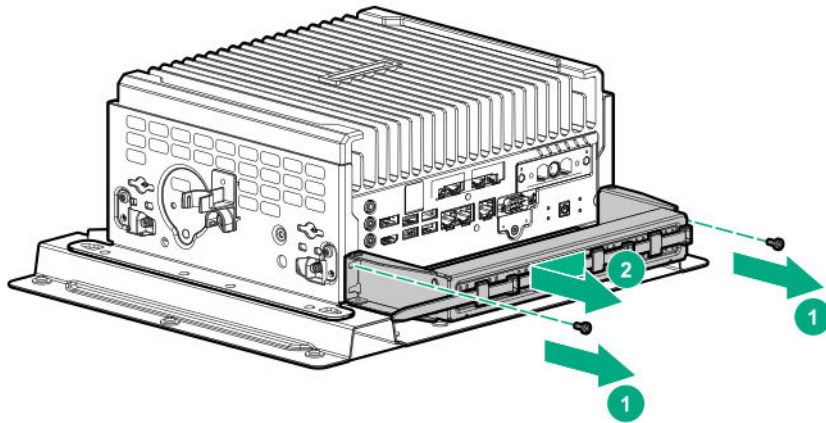
7. Remove the installed bracket panels:

- Base only bracket
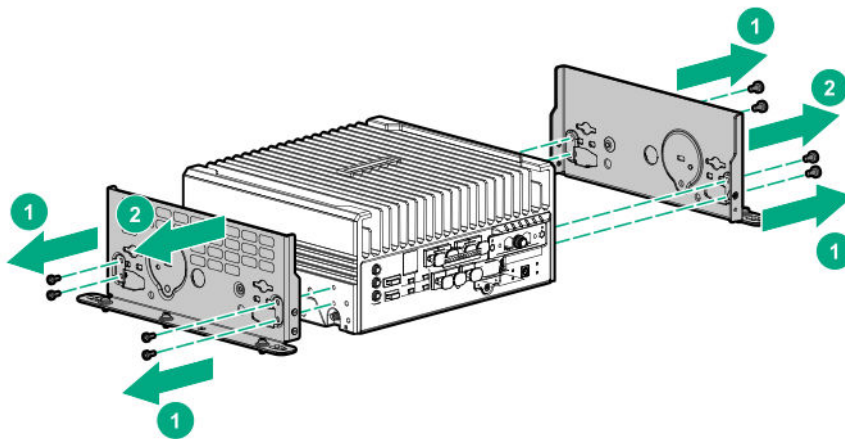
- Standard bracket
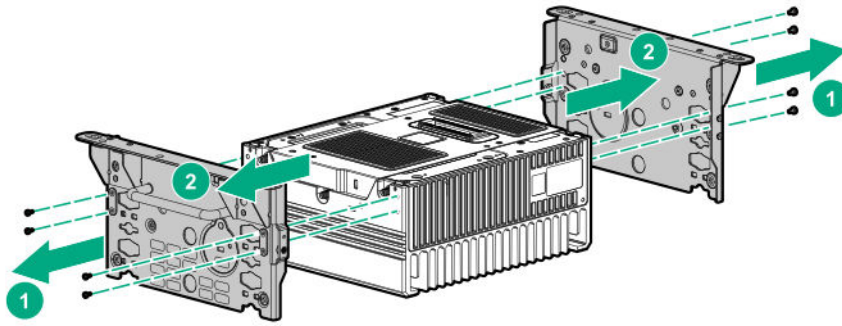
Removing the security cover

Prerequisites

Before you perform this procedure, make sure that you have the following items available:

- T-15 security screwdriver
- Phillips screwdriver

Procedure

1. **Power down the system**.

2. Remove all power:

   a. Disconnect the power cord from the power source.

   b. Disconnect the power cord from the system.

3. Depending on the surface the system is installed on, do one of the following:

   a. **Dismount the system from wall**.

   b. **Dismount the system from the rails**.

4. Place the server on a flat, level surface with the top cover facing down.

5. **Remove the antennas on the system**.

6. **Remove the installed bracket option**.

7. Remove the security cover:

   a. Remove the screws securing the security cover.
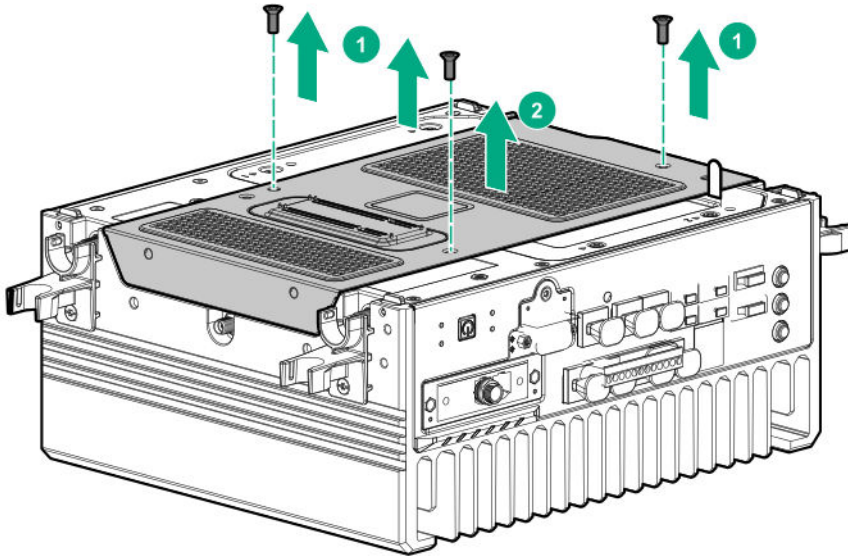
b. Detach the pins of the security cover from the system, and then remove the security cover.

Installing the security cover

Prerequisites

Before you perform this procedure, make sure that you have the Phillips screwdriver available.

Procedure

1. Install the security cover:

a. Align the pins on the security cover with the openings on the system.
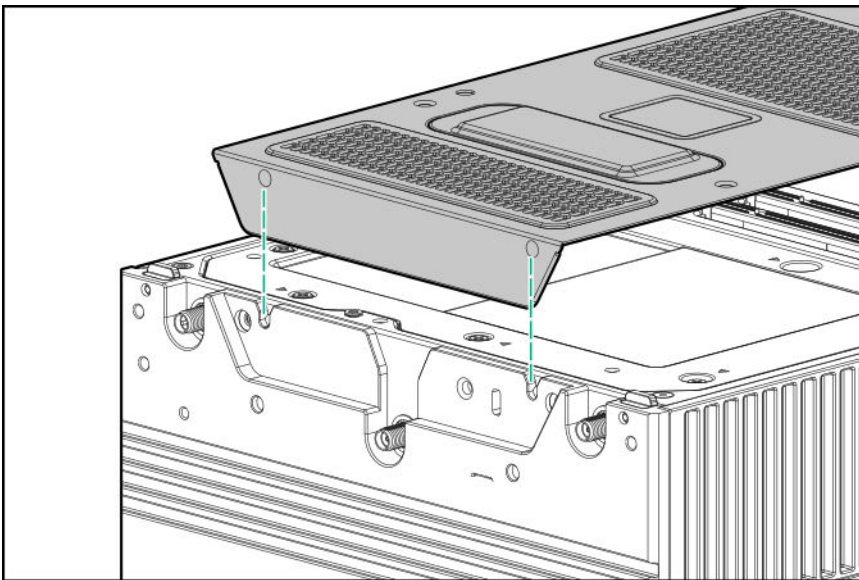
b. Install the screws on the security cover and secure it to the system.
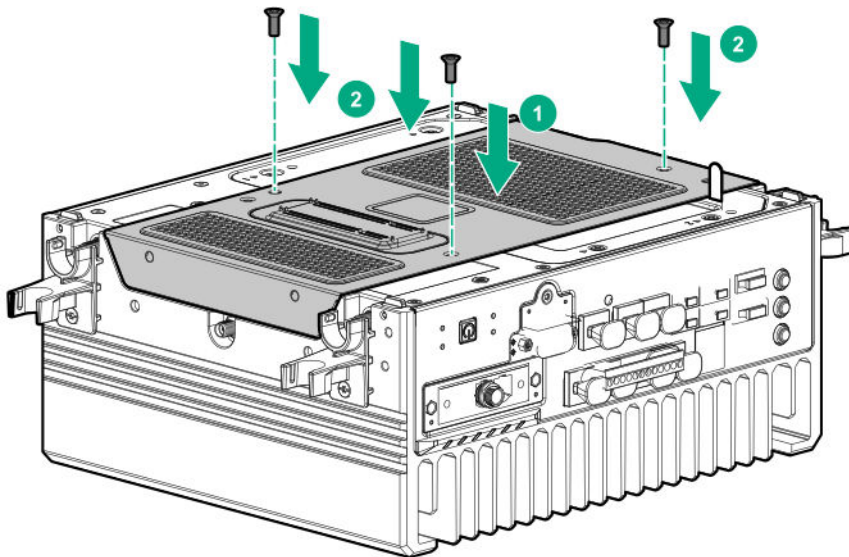
2. **Install the preferred bracket option**.

3. **Install the antennas**.

4. Do one of the following:

   - **Mount the system on wall**.

   - **Mount the system on rails**.

5. Connect the power cord to the system.

6. Connect the power cord to the power source.

7. **Power up the system**.

Removing the drive cage cover

Prerequisites

Before you perform this procedure, make sure that you have the following items available:

- T-15 security screwdriver

- Phillips screwdriver

Procedure

1. **Power down the system**.

2. Remove all power:

   a. Disconnect the power cord from the power source.

   b. Disconnect the power cord from the system.

3. Depending on the surface the system is installed on, do one of the following:

      a. **Dismount the system from wall**.

      b. **Dismount the system from the rails**.

4. Place the system on a flat, level surface with the top cover facing down.

5. **Remove the antennas on the system**.

6. **Remove the installed bracket option**.

7. **Remove the security cover**.

8. Remove the drive cage cover using the Philips screwdriver.

Installing the drive cage cover

Prerequisites

Before you perform this procedure, make sure that you have the Phillips screwdriver available.

Procedure

1. Install the drive cage cover, using the Phillips screwdriver.
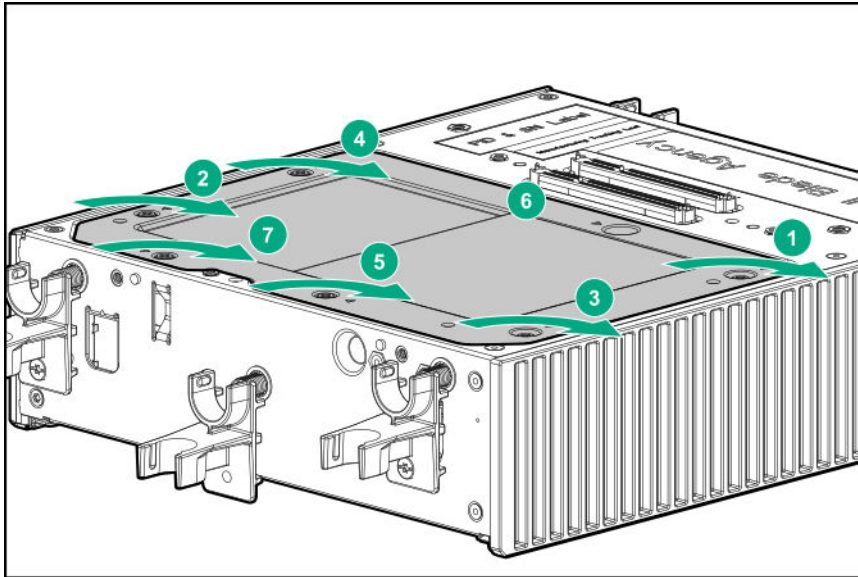
2. **Install the security cover**

3. **Install the preferred bracket option**.

4. **Install the antennas**.

5. Do one of the following:

   - **Mount the system on wall**.

   - **Mount the system on rails**.

6. Connect the power cord to the system.

7. Connect the power cord to the power source.

8. **Power up the system**.

Removing the heatspreader

Prerequisites

Before you perform this procedure, make sure that you have the following items available:

- T-15 security screwdriver
- Phillips screwdriver

Procedure

1. **Power down the system**.

2. Remove all power:

   a. Disconnect the power cord from the power source.

   b. Disconnect the power cord from the system.

3. Depending on the surface the system is installed on, do one of the following:

    a. **Dismount the system from wall**.

    b. **Dismount the system from the rails**.

4. **Remove the antennas on the system**.

5. **Remove the installed bracket option**.

6. **Remove the security cover**.

7. **Remove the drive cage cover**.

8. Remove the heat spreader.
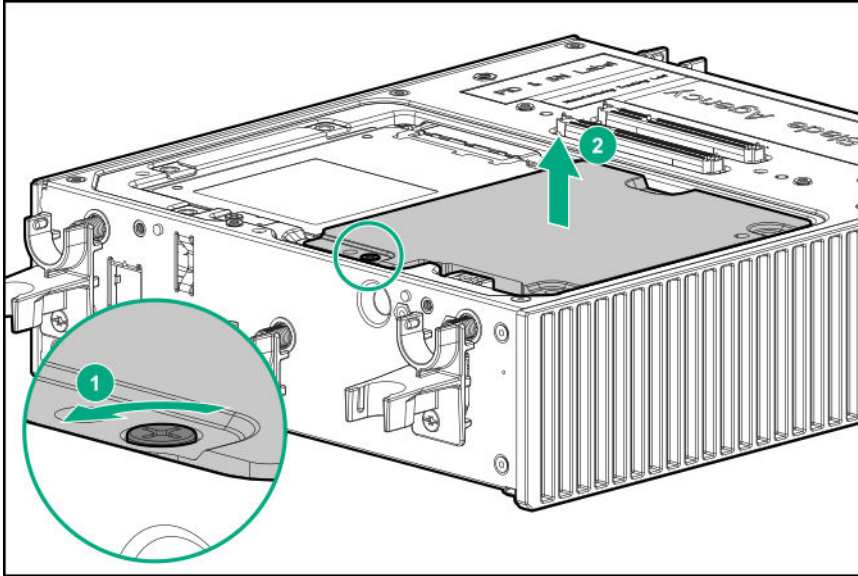
Installing the heatspreader

Prerequisites

Before you perform this procedure, make sure that you have the following items available:

- T-15 security screwdriver
- Phillips screwdriver

Procedure

1. Install the heat spreader.
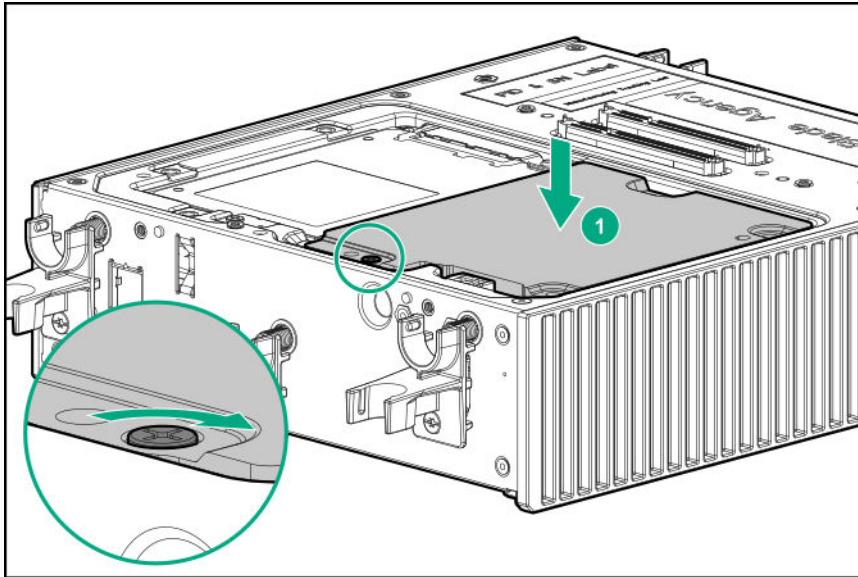
2. **Install the drive cage cover**.

3. **Install the security cover**

4. **Install the preferred bracket option**.

5. **Install the antennas**

6. Do one of the following:

   - **Mount the system on wall**.

   - **Mount the system on rails**.

7. Connect the power cord to the system.

8. Connect the power cord to the power source.

9. **Power up the system**.

Configuration

Prepare for configuration

Prepare to configure your new system by completing the tasks below.

1. **Verify operating system support**

    For information about supported operating systems, see the *Supported Operating Systems for Edgeline, Moonshot, and IoT Gateway Systems* at **http://www.hpe.com/support/edgeline-moonshot-IoT-OS**.

2. **Gather operating system installation media and product key** (Windows, Linux)

    Operating system installation can be performed using a network share (PXE boot), USB, SD card, or virtual media. Be sure to have installation keys for operating systems that require them, and read any implementation notices that accompany the OS. For portable media, the drive must have enough space to store a complete OS image, with enough space left over for OS reporting files. HPE recommends that portable media have a minimum of 32GB of space before storing installation images.

    > **NOTE:** An iSM Advanced license is required to use virtual media.

3. **Verify network connectivity**

    Ensure that the network connection is active, if needed.

4. **Verify Internet connectivity**

    Verify Internet access from your business network. Make a note of the gateway IP address, you may need it later.

5. **Plan for the network address**

    If you do not have DHCP enabled on the network, you must have networking details ready: An IP address to assign, subnet mask, gateway address, and DNS name. For initial setup, it is faster to allow automatic assignment of these details by connecting your system to a DHCP enabled network.

Connecting to HPE iSM the first time

Once the system is unboxed, connected to your management network, and powered up, there are a few options for accessing iSM the first time. You can initially configure iSM by:

*   Connecting to the iSM web interface using the WiFI access point (WiFi AP).

*   Connecting to the iSM web interface through the management network.

*   Connecting to the iSM CLI using a DB9 null modem serial cable and retrieving the DHCP assigned IP address.

Connecting to the web interface using the WiFi Access Point

HPE recommends this method for initial configuration.

Prerequisites

*   System hardware unboxed and powered up, and WiFi antenna connected

*   System hardware unboxed, installed, and powered up

*   Username and password noted from the chassis tag

*   WiFi-enabled laptop or mobile device

Procedure

1. Search for available WiFi connections on your device.

   The WiFi SSID starts with **iSM**, followed by a dash, and up to 12 letters and numbers. The letters and numbers are the Chassis Serial Number that is on the chassis tag. For example, **iSM-813d2g5144fd**.

2. Select the iSM WiFi connection.

3. Open a browser window to `192.168.37.1` to access the iSM login page. Log in with the credentials printed on the chassis tag.

   NOTE: If this is the first time logging into the system, you are required to change the password.

Connecting to the web interface using Ethernet

When your setup devices are not WiFi-enabled, acquire the IP address or hostname through your management network.

Prerequisites

- System hardware unboxed and powered up

- Username and password noted from the chassis tag

- Ethernet cable

- DHCP enabled network

Procedure

1. Connect an Ethernet cable between the MGMT port on the system chassis and your management network.

2. Wait for the hostname of your new system to propagate onto your network through DDNS and have an IP address assigned through DHCP.

3. On a separate computer connected to your network, enter the address `https://<iSM hostname or IP address>` in a browser window. HTTPS (HTTP exchanged over an SSL encrypted session) is required for accessing the iSM web interface.

   To use the hostname, enter the fully qualified domain name (if your computer is outside the domain) or just the hostname (if your computer is inside the domain).

4. Log in with the default credentials listed on the system chassis tag.

Connecting to the CLI in a serial session

If ICMP ping or other tools are disabled on your management network, retrieve the IP address in a serial session.

Prerequisites

- System hardware unboxed and powered up

- Username and password noted from the chassis tag

- Null modem serial cable with connectors or adapters suitable for your environment

- DHCP enabled management network

Procedure

1. Connect a null modem serial cable to the serial port on the system. Connect the other end to the system you are using to configure.

   NOTE: If your system was shipped with an HPE Edgeline Dual Serial Port daughter card, do not use serial daughter ports for initial configuration of the system.

2. Use a standard tool like PuTTY to start a serial terminal session on the system you are using to configure. Use the following settings:

Specification	Value
Serial Line	Appropriate for the system you are using to connect
Baud rate	115200
Data bits	8
Parity	None
Stop bit	1
Flow control	XON/XOFF

3. Log in by entering the default credentials shown on the chassis tag at the prompt.

4. To see the network details, enter the `show network` command.

The iSM web interface

Use the iSM web interface to manage your Edgeline EL300. You can also use the iSM CLI.

Browser requirements

The iSM web interface requires a browser that meets the following requirements:

- **JavaScript**—The iSM web interface uses client-side JavaScript extensively.

  This setting is not enabled by default in all versions of Internet Explorer. To check or change this setting, see **Enabling JavaScript for Internet Explorer**.

- **Cookies**—Cookies must be enabled for certain features to function correctly.

- **Pop-up windows**—Pop-up windows must be enabled for certain features to function correctly. Verify that pop-up blockers are disabled.

- **TLS**—To access the iSM web interface, you must enable TLS 1.0 or later in your browser.

Supported browsers

iSM supports the following browsers:

- Microsoft Edge version 80 or later

- Mozilla Firefox (latest version)

  NOTE: Due to a limitation in link local IPv6 handling in Firefox, you cannot use Firefox when accessing iSM using IPv6 on SUSE Linux Enterprise Server 15 SP0.

- Google Chrome desktop version 79.0.3945.79 (Official Build) (64-bit) or later

- Apple Safari desktop (latest version)

- Microsoft Internet Explorer 11

NOTE: If you encounter errors when using Internet Explorer 11, be sure to download and install this update from Microsoft:

https://support.microsoft.com/en-us/help/4537767/cumulative-security-update-for-internet-explorer

Enabling JavaScript for Internet Explorer

Some versions of Internet Explorer have JavaScript disabled by default. Use the following procedure to enable JavaScript.

Procedure

1. Start Internet Explorer.

2. Select **Tools** > **Internet options**.

3. Click **Security**.

4. Click **Custom level**.

5. In the **Scripting** section, set **Active scripting** to **Enable**.

6. Click **OK**.

7. Refresh your browser window.

Logging in to the web interface

Procedure

1. Enter `https://<EL300 iSM host name or IP address>`

   When you access the iSM web interface, you must use HTTPS (HTTP exchanged over an SSL encrypted session).

   The iSM login page opens. If a login security banner is configured, the banner text is displayed above the login section.

2. Enter a local account **Username** and **Password**, and then click **Log In**.

   TIP: When logging in to the iSM web interface for the first time:
   - The default username is `iot`. The username is case sensitive.

   - The default password is printed on the label attached to the chassis.

About the iSM web interface controls

The left pane of the iSM web interface can be hidden from view at any time. Hiding the left pane gives more space for the main pages to be displayed, but hides the navigation tree.

- To hide the left pane, click **X** or click .

- To show the left pane, click .

Logout, lock, and help

There are three icons shown at the bottom of the left pane when the pane is open:

- —This icon shows the currently logged-in username and a **Logout** option. Clicking **Logout** closes your web interface session and returns to the login screen.

- —This icon locks iSM and prevents configuration changes in the web interface and CLI. Clicking the icon opens a confirmation dialog. Click **Lock System** or **No, Go Back**. You are asked to verify your choice a second time.

  > **IMPORTANT:** A license that supports this feature must be installed.

- —This icon displays the online help for the iSM web interface.

Confirmation, status, and error messages

Some pages of the iSM web interface require you to scroll down to see all the options available, or to reach an **Apply** button. Confirmation, status and error messages display at the top of the page, so remember to scroll back up to the top of the page after clicking **Apply**.

Complete the network configuration using Integrated System Manager and install an operating system

Complete the configuration by performing the following tasks.

The details for these tasks can be found in the *HPE Integrated System Manager User Guide* at **http://www.hpe.com/support/EL300-iSM-UG-en**.

> **NOTE:** iSM communicates with Remote Console over a private 16.x.x.x subnet. Do not connect the MGMT port, and by extension iSM, to a subnet that has the same address space or network errors will occur.

1. Configure all iSM network connection settings that you intend to use on the **Wired and Wireless Network** pages:

   - Enable and configure the WiFI access point on the **WiFi AP** page. This method of access can only be used for initial setup.

   - Configure a WiFi network connection on the **WiFi** page.

   - Enable and configure cellular access on the **LTE** page.

   - Configure the **Host Name Settings** on the **General** page.

   - Choose and configure LAN addressing on the **IPv4** or **IPv6** pages.

   Click here for detailed instructions about configuring network settings.

2. Update firmware or add files to the repository on the **Firmware** pages. Download firmware updates from the HPE Support Center at **http://www.hpe.com/support/hpesc**.

   Click here for detailed instructions about updating the firmware.

3. Store an operating system image on your chosen installation media. You can install an operating system from a USB drive, virtual USB (virtual media), SD card, or PXE.

NOTE: If you plan to use virtual media, mount the media before starting a remote console session or changing the host boot order. An iSM Advanced license is required to use virtual media and the remote console. For detailed information about the iSM Advanced license, see the *HPE Edgeline IoT and Converged Edge Systems Licensing Guide* at **https:// www.hpe.com/support/EL-IoT-Converged-Edge-System-Licensing-en**.

> ⓘ **IMPORTANT:** When using virtual media to install a Windows operating system, Windows may interrupt the installation by asking for a driver. To avoid this, use a boot-ready consolidated image of a bootable USB Windows installation.

4. Update the host boot order in BIOS, iSM GUI, or by using the iSM CLI so that the next reboot of the host system checks your chosen installation media first.

NOTE: HPE recommends setting the boot order on the iSM GUI **Boot Order** page. Use remote console (iSM Advanced license required) to update the boot order in BIOS, or connect a keyboard, monitor, and mouse directly to the system. To update the boot order using the iSM CLI, open an SSH command-line session to the IP address of iSM.

For the specific commands required to set boot order, see the *HPE Integrated Service Manager User Guide* on the HPE Information Library at **http://www.hpe.com/info/EIL**.

Click here for detailed instructions about modifying the boot order.

5. Restart the host system and following the onscreen instructions to install the operating system.

Click here for detailed instructions about managing the system power.

6. Immediately after installing the OS, unmount the virtual media and then move **SATA** or **NVMe** to the top of boot order (depending on where you installed the OS).

Click here for detailed instructions about modifying the boot order.

7. Register the product.

Network Summary

iSM provides multiple options for network connection.

To access the network settings, view or edit the network settings on the following pages:

- **Summary**

- **General**

- **IPv4**

- **IPv6**

- **WiFi**

- **WiFi AP**

- **LTE**

- **Proxy**

Viewing the network configuration summary

Procedure

Click **Wired and Wireless Network** in the navigation tree.

The **Summary** tab is displayed.

Network configuration summary details

- **Name**—The name of the active iSM network interface.

- **Host Name**—The name assigned to the iSM subsystem. By default, the host name is iSM, followed by the system serial number. This value is used for the network name and must be unique.

  NOTE: You can configure the iSM host name on the **General** page.

- **MAC Address**—The MAC address of the iSM network interface.

- **Permanent MAC Address**—The unchangeable MAC address of the iSM network interface.

- **FQDN**—The fully qualified domain name of the system.

- **IPv6 Default Gateway**—When IPv6 is enabled, the gateway is the default IP address iSM uses to access the network. When not enabled, this entry is blank.

- **Speed (Mbps)**—The speed of the wired network, measured in megabits per second.

- **WiFi Network**—The SSID of the WiFi network (if connected).

- **Cellular Network**—The broadband wireless provider.

IPv4 Summary details

- **Address**—The IPv4 address currently in use. If the value is `0.0.0.0`, the IPv4 address is not configured.

- **Address Origin**—Indicates whether the address was supplied automatically by DHCP or is static.

- **Gateway**—The gateway address in use for the IPv4 protocol. If the value is `0.0.0.0`, the gateway is not configured.

- **Subnet Mask**—The subnet mask of the IPv4 address currently in use. If the value is `0.0.0.0`, no address is configured.

IPv6 Summary details

- **Address**—The IPv6 address currently in use. If the value is blank, the IPv6 address is not configured.

- **Address State**—Indicates whether the address was supplied automatically or is static.

- **Gateway**—The gateway address in use for the IPv6 protocol. If the value is blank, the gateway is not configured.

- **Prefix Length**—The subnet mask of the IPv6 address currently in use.

- **Link Local Address**—The IPv6 address for the network segment.

- **Link Local Gateway**—The IPv6 address of the local network segment gateway. If the value is blank, the gateway is not configured.

- **Prefix Length**—The subnet mask of the IPv6 link-local address.

IPv6 Address Policy table

A table is displayed that shows whether IPv6 or IPv4 addresses are preferred.

WiFi Summary details

- **SSID**—The service set identifier which provides the name of the wireless network.

- **Strength**—A measure of how powerful the signal strength of the connection is to the WiFi network.

- **Status**—The status of the WiFi connection, connected or not connected.

- **Security**—The type of security in use on the WiFi connection.

LTE Summary details

- **Owner**—Indicates whether LTE is used by the host or by iSM.

- **APN**—The access point name, which may or may not include an operator identifier.

- **Status**—Indicates the state of the connection.

Configuring Proxy settings

If you have a proxy on your network, you can configure iSM to use it.

Procedure

1. Click **Wired and Wireless Network** in the navigation tree, and then click the **Proxy** tab.

   The Proxy page appears.

2. Enter the FQDN or IP address of the proxy server in the **Proxy** field.

3. Click **Apply**.

Configuring Host Name Settings

Use the **General** page to configure the **Host Name** and **Domain Name**. The host name and the domain name together constitute the fully qualified domain name.

Prerequisites

iSM Admin privilege

Procedure

1. Click **Wired and Wireless Network** in the navigation tree, and then click the **General** tab.

2. Enter the **Subsystem Name (Host name)**.

   The host name is the DNS name of the iSM subsystem. This name can be used only if DHCP and DNS are configured to connect to the iSM subsystem name instead of the IP address.

3. Enter the **Domain Name** if DHCP is not configured.

4. Click **Apply**.

Host name and domain name limitations

The **Subsystem Name (Host name)** is initially set at the factory, and is listed on the chassis tag. This default host name is a combination of **iSM** followed by the system serial number.

When reconfiguring the **Host Name Settings**, note the following:

- **Name service limitations**—The subsystem name is used as part of the DNS name.

  - DNS allows alphanumeric characters and hyphens.

  - Always start the hostname with a letter, and not with a number or a hyphen. Any combination of letters, numbers, and the hyphen can be used after the first letter.

  - Name service limitations also apply to the **Domain Name**.

- **Namespace issues**—To avoid these issues:

  - Do not use the underscore character.

  - Limit subsystem names to 15 characters.

  - Verify that you can ping the iSM processor by IP address and by DNS name.

  - Verify that NSLOOKUP resolves the iSM network address correctly and that no namespace conflicts exist.

  - Flush the DNS name if you make any namespace changes.

Configuring IPv4 settings

Prerequisites

iSM

Admin privilege

Procedure

1. Click **Wired and Wireless Network** in the navigation tree, and then click the **IPV4** tab.

2. **Enable** the **IPv4 Configuration** setting.

3. Configure the **DHCPv4 Configuration** setting.

4. Configure the **IPv4 Address Configuration** settings.

5. Configure the **DNS Configuration** settings.

6. To save the changes you made on the **IPv4 Settings** page, click **Apply**.

7. When you are finished configuring the iSM network settings on the **Wired and Wireless Network** tabs, restart the iSM system.

   It might take several minutes before you can re-establish a connection.

DHCPv4 Configuration setting

The DHCPv4 setting is enabled by default.

Enable DHCPv4

Enables iSM to obtain an IP address (and other network specific address settings) from a DHCP server.

Static IPv4 Address Configuration settings

IPv4 Address

The iSM IP address. The IP address is supplied automatically when DHCP is enabled. When DHCP is not enabled, enter a static IP address.

IPv4 Subnet Mask

The subnet mask of the IP network. The subnet mask is supplied automatically when DHCP is enabled. When DHCP is not enabled, enter a subnet mask for the network.

IPv4 Gateway

The iSM gateway IP address. The iSM gateway IP address is supplied automatically when DHCP is enabled. When DHCP is not enabled, enter an IP address for the gateway.

IPv4 DNS Configuration settings

Primary DNS Server

This value is supplied automatically when DHCP is enabled. If you are using a static IP address, no name servers are used.

Secondary DNS Server

This value is supplied automatically when DHCP is enabled. If you are using a static IP address, no name servers are used.

Tertiary DNS Server

This value is supplied automatically when DHCP is enabled. If you are using a static IP address, no name servers are used.

Configuring IPv6 settings

Prerequisites

iSM Admin privilege

Procedure

1. Click **Wired and Wireless Network** in the navigation tree.

2. Click the **IPv6** tab.

3. Configure the **Global IPv6 Configuration** setting, and enable IPv6.

4. Configure the **IPv6 Configuration** settings.

5. Configure the **DNS Configuration** settings.

6. To save the changes you made on the **IPv6 Settings** page, click **Apply**.

7. If you are finished configuring the iSM network settings, restart iSM.

   It might take several minutes before you can re-establish a connection.

IPv6 Configuration settings

Global IPv6 Configuration

Client Applications use IPv6 first

This option specifies which protocol iSM is tried first when accessing a client application. It is useful when both IPv4 and IPv6 service addresses are configured for iSM client applications. This setting also applies to lists of addresses received from the name resolver when using FQDNs to configure NTP.

- Enable this option if you want iSM to use IPv6 first.

- Disable this option if you want iSM to use IPv4 first.

If communication fails when attempting to use the first protocol, iSM automatically tries the second protocol.

This option is enabled by default.

IPv6 Configuration

Enable IPv6 in Auto Mode

Enable this option to configure iSM to use an IPv6 DHCP server (if found). If no IPv6 DHCP server is available, IPv6 automatically falls back to using SLAAC. This option is enabled by default.

iSM creates its own link-local address even when this option is not enabled.

NOTE: Entering the command `set network6 off` at the Integrated System Manager CLI disables IPv6, and no IPv6 addresses can be used. The link-local address is disabled when IPv6 is disabled.

IPv6 Static Address

When assigning static IPv6 addresses, enter the main IP address here.

IPv6 Static Address Prefix Length

When assigning static IPv6 addresses, enter the prefix length here.

IPv6 Default Gateway

When assigning static IPv6 addresses, enter the default IPv6 gateway here.

DNS Configuration

When assigning static IPv6 addresses, enter the **Primary**, **Secondary**, and **Tertiary DNS Server** addresses.

Configuring WiFi settings

A WiFi connection presents an alternative when a wired connection is not feasible.

Prerequisites

iSM Admin privilege

Procedure

1. Click **Wired and Wireless Network** in the configuration tree, and then click the **WiFi** tab.

   The iSM scans for WiFi signals and displays any SSIDs that are in range. The system will continue to scan until an SSID is found.

2. Click an **SSID**.

   The credentials page displays.

> **NOTE:** Hewlett Packard Enterprise strongly recommends only connecting to secure networks.

3. Enter the password, and modify other settings as needed.

4. To activate the WiFi connection, select **Enable**.

5. Click **Apply**.

   The iSM connects to the WiFi.

6. Optional: To force a new check for available WiFi networks, click **Scan**.

7. Optional: To manually add a non-broadcasting SSID, click **Add WiFi**.

> ⚠ **WARNING:**
>
> - **FCC warning:** 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.
>
> - **Canada warning:** This device complies with Industry Canada licence-exempt RSS standards. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
>
> - **French warning:** il est conforme aux normes d'exemption de licence RSS d'Industrie Canada. Son fonctionnement est assujetti aux deux conditions suivantes : 1) Ce dispositif ne doit causer aucune interférence dangereuse, et 2) ce dispositif doit accepter toute interférence reçue, y compris les interférences pouvant provoquer un fonctionnement indésirable.

Configuring WiFi Access Point settings

Prerequisites
iSM Admin privilege

Procedure

1. Click **Wired and Wireless Network** in the navigation tree, and then click the **WiFi AP** tab.

   The WiFi Access Point page appears.

2. Use **Enable/Disable** to control the state of the WiFi access point.

3. Enter a **SSID**.

4. Click **Apply**.

> **NOTE:**
>
> - When connecting to the access point, you will be required to enter your iSM credentials. Credentials are case sensitive.
>
> - The use of the WiFi AP is used only for initial configuration of iSM.
>
> - Enabling or disabling the access point may cause iSM network connections to become unresponsive for 10 seconds.

Configuring LTE settings

iSM can connect to an LTE network to provide cellular data access to the user interface.

NOTE: When disabling and then re-enabling the APN, there is a delay before the settings are restored and appear on the page. Wait until the settings reappear before continuing.

Procedure

1. Click **Wired and Wireless Network** in the navigation tree, and then click the **LTE** tab.

   The LTE Configuration page appears.

2. To configure iSM, click **iSM**.

3. Enter the **APN** (Access Point Name) to present to the carrier.

4. Click Apply.

   The following information will be automatically be provided after a few seconds:

   - **IMEI** (International Mobile Equipment Identity)

   - **IMSI** (International Mobile Subscriber Identity)

   - **IP**

5. To configure the host, click **Host**.

6. Enter the **APN** (Access Point Name) to present to the carrier.

7. Click Apply.

   The following information will be automatically be provided after a few seconds:

   - **IMEI** (International Mobile Equipment Identity)

   - **IMSI** (International Mobile Subscriber Identity)

   - **IP**

Finding the wireless broadband modem (LTE) settings in Microsoft Windows

If you need to find the settings to complete the LTE Configuration in iSM, follow this procedure.

Prerequisites

- HPE Edgeline Wireless WAN 4G/LTE EM7565 Wide Temperature option kit installed

- SIM card installed

- Windows installed on host

- LTE drivers downloaded and available

Procedure

1. If needed, open a Remote Console session to the Windows host OS.

2. In the host Windows OS, navigate to the driver setup file and **Run as administrator**.

   This enumerates the driver in Windows Device Manager.

3. Open **Windows Device Manager** and verify the Sierra Wireless card is shown in the Modems section.

4. Right click the Sierra modem entry and select **Properties**.

5. Click the **Modem** tab in the Properties window and note the COM port.

   NOTE: This port may change when the host system is rebooted.

6. Using a terminal program, connect to the COM port found in the previous step, in a serial session. Set the serial session configuration to 115200n8.

7. In the terminal session, enter the command `ati1` and record the results to get the settings relevant to completing the LTE configuration in iSM.

   The settings you will need include:

   - APN

   - IMEI

   - IMSI

   - IP

Connecting the system to a cellular network in Microsoft Windows

Prerequisites

- HPE Edgeline Wireless WAN 4G/LTE EM7565 Wide Temperature option kit installed

- SIM card installed

- Windows installed on host

Procedure

1. If needed, open a Remote Console session to the Microsoft Windows host OS.

2. In the host Microsoft Windows OS, navigate to the network connections.

3. Right click the Cellular connection and select **Connect/Disconnect**.

   A page displays showing the connection options for the cellular modem. **Connect automatically** is selected by default. The system is now connected to cellular broadband.

4. Verify the connection by pinging a responsive server.

Viewing installed firmware information

Procedure

Click **Firmware** in the navigation tree.

The **Firmware** page displays firmware information for various components.

If the system is powered off, the information on this page is current as of the last power off. Firmware information is updated only when the system is powered on and POST is complete.

Firmware types

The firmware types listed on the **Firmware** page vary based on the system configuration.

For most configurations, the system BIOS, CPLD, and iSM firmware and base image are listed. Other possible options include TPM, HPE remote device access, and option card.

Firmware details

The Firmware page displays the following information for each listed firmware type:

- **Firmware name**—The category name of the firmware.

- **Firmware version**—The currently installed version number of the firmware.

Updating firmware

While firmware can be updated using components uploaded to the iSM Repository, you can also update firmware directly.

NOTE: Updates to firmware can be performed in this manner for the CPLD, iSM, and BIOS. However, base image updates, which replace the iSM web and CLI interfaces entirely with newer versions, must be performed out of band using the host operating system. Additionally, updates can be required to be installed in a specific order.

Prerequisites

iSM Admin privilege

Procedure

1. Click **Firmware** in the navigation tree, and then click **Update Firmware** in the right pane.

2. Select the **Local file** or **Remote file** option.

3. Depending on the option you selected, do one of the following:

   a. In the **File** box, click **Browse** (Internet Explorer or Firefox) or **Choose File** (Edge or Chrome), and then specify the location of the firmware component.

   b. In the **URL** box, enter the URL for a firmware component on an accessible web server.

4. Click **Flash**.

   The firmware update status will be visible in the event log.

Adding components to the iSM Repository

Prerequisites

Admin privilege

Procedure

1. Click **Firmware** in the navigation tree, and then click **Upload to Repository** in the right pane.

2. Select the **Local file** or **Remote file** option.

3. Depending on the option you selected, do one of the following:

   a. In the **File** box, click **Browse** (Internet Explorer or Firefox) or **Choose File** (Edge or Chrome), and then specify the location of the firmware component.

   b. In the **URL** box, enter the URL for a firmware component on an accessible web server.

4. Click **Upload**.

   The file is uploaded to the repository and displayed in the repository contents list.

Installing a component from the iSM Repository

You can install new firmware from the iSM Repository page.

Prerequisites

Admin privilege

Procedure

1. Click **Firmware** in the navigation tree, and then click **Repository**.

2. Click the install component icon next to the component you want to install.

3. Click **Yes, install now**.

   The update begins immediately.

Boot order

The **System Boot Order** feature enables you to set the system boot device priority.

Changes made to the boot order might require a system reset.

An error occurs if you try to change the system boot order when the system is in POST. You cannot modify the boot order during POST. If this error occurs, wait for POST to finish, and then try again.

Configuring the system boot order

Procedure

1. Click **Administration** in the navigation tree, and then click the **Boot Order** tab.

2. (Optional) Use the controls to add or remove **Devices Supported** to or from the **Boot Order** list.

   a. To add a boot device to the **Boot Order** list, select a boot device in the **Devices Supported** list and then click **Select**.

   b. To remove an item from the **Boot Order** list, select a boot device and then click **Remove**.

3. To move a device up or down in the boot order, select the device in the **Boot Order** list, and then click **Up** or **Down**.

4. Click **Apply**.

   The system confirms that the boot order was updated successfully.

NOTE: Any applied changes to the boot order require two system reboots to become active.

Managing the system power

The **Virtual Power Button** section on the **System Power** page displays the current system power state, as well as options for remotely controlling system power. **System Power** indicates the state of the system power when the page is first opened. Use the browser refresh feature to view the current system power state. The system is rarely in the **Reset** state.

Procedure

1. Click **Power and Thermal** in the navigation tree.

   The page opens with the **System Power** tab selected.

2. Click a button to change the power state. The available buttons change according to the current power state.

3. When prompted to confirm the request, click **OK**.

Supported system power status types

The **System Power** status displayed on this tab can include multiple power modes, depending on the support offered by the installed operating system. The buttons and actions displayed on this tab change depending on the power mode.

System Power: (S-status)	Buttons displayed and affect when clicked
System Power: Off (S5)	**Power On**—Equivalent to pressing the physical power button to turn the system on.
System Power: On (S0)	**Push Power Button**—Equivalent to pressing the physical power button. The result of this action depends on the configuration of the host's operating system.
	Force Power Off—Equivalent to holding down the host power button to turn the host off.
	Force System Reset—Forces the server to warm-boot: CPUs and I/O resources are reset. Using this option circumvents the graceful shutdown features of the operating system.
System Power: Sleep/Suspend (S3)	**Wake**—Equivalent to pressing the physical power button to wake the host.
	Force Power Off—Equivalent to holding down the host power button to turn the host off.
System Power: Hibernate (S4)	**Power On**—Equivalent to pressing the physical power button to turn the system on.
	Full Shutdown—Equivalent to holding down the power button to completely shut down the host. Clicking this moves the host to state S5.

Virtual Power Button labels

Each button available during the different supported power modes (determined by operating system support) is labeled. These labels refer to an equivalent physical button activity typically included on a computer system.

- **Momentary Press**—Clicking this button type is equivalent to momentarily pressing the physical power button.

Some operating systems might be configured to initiate a graceful shutdown after a momentary press, or to ignore this event, or to wake from a low-power mode.

- **Press and Hold**—Clicking this button type is equivalent to pressing the physical power button for 5 seconds and then releasing it.

  This option provides the ACPI functionality that some operating systems implement. These operating systems behave differently depending on a short press or long press.

- **Reset**—Clicking this button type is equivalent to clicking a physical reset button. This can force the server to warm-boot, and CPUs and I/O resources are reset. Using this option circumvents the graceful shutdown features of the operating system. If possible, be sure to manually shut down the operating system using OS controls before clicking this button type.

Prepare the system for daily use after installing an operating system

Prepare your new system for service by completing the following tasks after installing an operating system.

See the detailed steps for these tasks in the *HPE Integrated Service Manager User Guide* on the HPE Information Library at **www.hpe.com/support/EL300-iSM-UG-en**.

- Access iSM from practically anywhere, or access the host operating system using Remote Console (after acquiring a license).

  NOTE: To enable Remote Console, Virtual Media, Configuration Lock, and the Disable function, you must have an iSM Advanced license.

- Add authorized user accounts in iSM on the **User Administration** page. Remove the default user ID and password.

- Add SSH keys for each user on the **Security** page.

- Replace the default self-signed certificate and create a trusted SSL certificate for iSM on the **SSL Certificate** page.

- Configure option cards as needed on the **Option Card** page.

- Control the system and chassis power, and view temperatures, from the **Power and Thermal** pages.

- Back up the iSM configuration on the **Backup & Restore** page.

- To decommission the system, use the **Secure Erase** function.

- If you become concerned about system tampering, disable the system on the **Disable** page. An iSM Advanced license is required to disable a system.

- Troubleshoot system issues by viewing the Health and Event logs on the **Logs** page.

- Disable external ports and buttons as needed.

- Set an asset tag.

- Enable the BIOS Configuration Lock.

- Enable HPE Remote Device Access.

- Configure ignition timeouts (if the system is installed in a vehicle.)

- Configure session timeouts.

iSM licensing

iSM standard features are included with every HPE Edgeline EL300 Converged Edge System to simplify system setup and to help monitor health, power, and thermal control.

The iSM Advanced license activates four advanced features of the interface:

- System Lock

- Remote Console

- Virtual Media

- System Disable

For detailed information about licensing, see the *HPE Edgeline IoT and Converged Edge Systems Licensing Guide* at **https:// www.hpe.com/support/EL-IoT-Converged-Edge-System-Licensing-en**.

Viewing iSM installed licenses

iSM 1.4 accepts two types of licenses. The Advanced license enables the Remote Console, Virtual Media, Lock, and Disable features. The WiFi Radio License enables the WiFi radio and is available free to users in countries where WiFi certification is required.

NOTE: Earlier versions of iSM firmware do not display the WiFi Radio License. If the WiFi Radio License Status section is not present, then WiFi is enabled by default.

Procedure

1. Click **Administration** in the navigation tree, and then click **License**.

2. Installed licenses are displayed in the **Advanced License Status** and **WiFi Radio License Status** sections of the page.

   The license details include the start date, the expiration date, and the status of the installed license.

Why register your iSM Advanced license?

- Registration activates a unique HPE Support Agreement ID (SAID). Your SAID identifies you and the products you use.

- You can obtain quicker HPE Support Services by using your SAID.

- Obtain access to the HPE Support Center.

- Obtain access to software updates in the HPE Update Center.

- Receive important product alerts.

- Track your HPE product license keys in one place through the HPE licensing portal.

Installing an iSM license

Procedure

1. Click **Administration** in the navigation tree, and then click **License**.

2. Regardless of the type of license to be installed, click **Install License**.

3. Select the **Local file** or **Remote file** option.

4. Depending on the option you selected, do one of the following:

   a. In the **File** box, click **Browse** (Internet Explorer or Firefox) or **Choose File** (Edge or Chrome), and then specify the location of the license file.

   b. In the **URL** box, enter the URL for a license file on an accessible web server.

5. Click **Install**.

   The license is uploaded and installed to the system and displayed in the applicable license status section of the page.

Installing a license using REST API

Prerequisites

- Privileges to configure iSM settings.

- A valid iSM license file stored on the local system or uploaded to a web server.

- The iSM date and time are set correctly.

- Network connectivity to iSM.

Procedure

1. Locate your license activation key.

2. Download a Redfish interface tool such as Postman (**https://www.getpostman.com/**).

3. Enter the license using the JSON Constrained Notation script.

   Sample license JSON script:

```
Add license via remote file:
URI: (POST) https://{{iSM-ip}}/redfish/v1/Managers/1/LicenseService/Actions/LicenseService.InstallLicense
Input data(JSOn format): {"ImageURI": "URL" } [URL= Link to the license file]

Output:
{
    "error": {
        "@Message.ExtendedInfo": [],
        "code": "Base.1.0.0.Success",
        "message": "The operation completed successfully."
    }
}

Add license via local file (Customer will need to install some tool like Postman for using this below step)
URI: (POST) https://{{iSM-ip}}/redfish/v1/Managers/1/LicenseService/InstallLicenseFromPost
Input Data: (form-data) file, value: Browse license file in client computer
Output:
{
    "error": {
        "@Message.ExtendedInfo": [],
        "code": "Base.1.0.0.Success",
        "message": "The operation completed successfully."
    }
}
```

Hardware port and button disablement

The Device Switches tab enables you to disable or enable certain hardware on the Edgeline EL300. Certain switches, such as the host reset button, iSM rest button, and power button, along with the four USB ports can be enabled or disabled as physical access conditions warrant.

Configuring hardware buttons and ports

Prerequisites

iSM Admin privilege

Procedure

1. Click **Administration** in the navigation tree, and then click **Device Switches**.

2. In the **Switch Configuration** section, select the following:

   a. For the **Serial Port** configuration, click to select whether the serial port is connected to **iSM** or to the **Host**. The default selection is **iSM**.

   b. Select whether to disable the following (default is enabled):

      - **SD Card** (port)

      - **Host Reset Button**

      - **Power Button**

      - **iSM Reset Button**

3. For the **USB Configuration** section, select whether to disable each USB port, **USB1** through **USB4** (default is enabled).

4. Click **Apply**.

Asset Tag

The Asset Tag assists your organization with tracking material. You can set the Asset Tag for the system on this page.

Setting the Asset Tag

Prerequisites

Admin privilege

Procedure

1. Click **Administration** in the navigation tree.

2. Click the **Asset Tag** tab.

3. Click in the **Asset Tag** field and enter an asset tag.

4. Click **Apply**.

   The interface reports that the asset tag was successfully set.

Configuring the BIOS Configuration Lock

Use the BIOS Configuration Lock to control access to the BIOS. You must have BIOS 1.31 or later installed to support this feature.

Procedure

1. Click **Administration** in the navigation tree, and then click **BIOS Configuration Lock**.

2. Enable or disable the **BIOS Configuration Lock** setting.

   - When this setting is **disabled**, access the BIOS by pressing **F9** at the appropriate time during boot.

   - When this setting is **enabled**, access to the BIOS is blocked.

3. Click **Apply**.

HPE Remote Device Access

HPE Remote Device Access (HPE RDA) allows HPE Support access to the system. When HPE RDA is enabled, HPE Support can login into the web interface or the CLI even if the system is behind a firewall. When contacting support, you will need to supply them with the system serial number (displayed on the **Information** > **Overview** page.)

The HPE Remote Device Access feature does not require that the system is registered with HPE Remote Support.

Configuring HPE Remote Device Access

Procedure

1. Click **Administration** in the navigation tree, and then click **HPE Remote Device Access**.

2. Enable or disable the HPE Remote Device Access setting.

3. Click **Apply**.

   A confirmation dialog displays.

4. Click the confirmation button to confirm your setting.

   To cancel, click the **X** at the top right of the message box.

Configuring the Ignition timer

The settings on this tab allow you to configure the time (in minutes) to delay the powering off of the host and system when the vehicle ignition is turned off. When enabled, the host and the system are kept running for the specified amount of time to allow further operation before shut down. These settings are only available if the ignition power board is installed.

Procedure

1. Click **Administration** in the navigation tree, and then click **Ignition**.

2. Set the **Host Power Off Delay** in minutes by entering a number or using the **+** and **-** buttons.

3. Set the **Switch Power Off Delay** in minutes by entering a number or using the **+** and **-** buttons.

4. Select a setting for the **Enable/Disable the timer** control.

5. Click **Apply**.

Ignition and timer delay sequence

When the vehicle is powered off, the following sequence begins:

1. The Switch Power Off Delay timer begins counting down. During this period you can interact with the system as normal.

2. When the Switch Power Off Delay timer ends, the Host Power Off Delay begins counting down and iSM attempts to gracefully power down the host operating system.

3. If the host operating system does not finish shutting down before the Host Power Off Delay timer reaches zero, iSM forces the OS off.

4. iSM powers off the system.

⚠ **WARNING:** If the **Enable/Disable the timer** setting is disabled, the Edgeline EL300 will continue to run, powered by the vehicle's battery, while the vehicle ignition is turned off. This may deplete the vehicle's battery. HPE recommends enabling this setting whenever the Edgeline EL300 is installed in a vehicle and powered through an ignition power board.

Configuring session timeouts

The Set Timeout page enables you to adjust the amount of time (in minutes) that passes without any activity by the user before a session is automatically closed. **Session Timeout** controls HTTP (web) sessions, and **SSH Timeout** controls CLI sessions.

Prerequisites

iSM Admin privilege

Procedure

1. Click **Security** in the navigation tree, and then click **Set Timeout**.

2. Enter the **Session Timeout**.

   The default is 30 minutes.

3. Enter the **SSH Timeout**.

   The default is 120 minutes.

4. Click **Apply**.

   The message `Successfully changed the timeout` displays.

Registering the product

To experience quicker service and more efficient support, register the product at the **Hewlett Packard Enterprise Product Registration website**.

Registering your server with HPE Remote Support

Registering your server with HPE provides the ability to quickly identify and resolve issues in an automated, seamless and secure way.

Procedure

1. Click **Remote Support** in the navigation tree, and then click **Registration**.

2. Click **Enable Support**.

3. Enter your HPE Passport user name and password.

4. Select **I accept the terms and conditions**. Click the terms and conditions link to view.

5. To view HPE's privacy policy, click **Privacy Policy**.

6. Click **Register**.

   After clicking **Register**, iSM begins reporting temperature events and hardware failures to HPE support automatically.

Unregistering the server with HPE

Unregistering your server removes the ability to solve issues in an automated manner.

Prerequisites

The server is already registered with HPE Remote Support.

Procedure

1. Click **Remote Support** in the navigation tree, and then click **Registration**.

2. Click **Unregister**.

Warranty and regulatory information

Notices for Eurasian Economic Union

ΕΛC

Manufacturer and Local Representative Information

Manufacturer information:

Hewlett Packard Enterprise, 6280 America Center Drive, San Jose, CA 95002 U.S.

Local representative information Russian:

- **Russia**

  ООО "Хьюлетт Паккард Энтерпрайз", Российская Федерация, 125171, г. Москва, Ленинградское шоссе, 16А, стр.3, Телефон: +7 499 403 4248 Факс: +7 499 403 4677

- **Kazakhstan**

  ТОО «Хьюлетт-Паккард (К)», Республика Казахстан, 050040, г. Алматы, Бостандыкский район, проспект Аль-Фараби, 77/7, Телефон/факс: + 7 727 355 35 50

Local representative information Kazakh:

- **Russia**

  ЖШС "Хьюлетт Паккард Энтерпрайз", Ресей Федерациясы, 125171, Мәскеу, Ленинград тас жолы, 16А блок 3, Телефон: +7 499 403 4248 Факс: +7 499 403 4677

- **Kazakhstan**

  ЖШС «Хьюлетт-Паккард (К)», Қазақстан Республикасы, 050040, Алматы к., Бостандық ауданы, Әл-Фараби даңғ ылы, 77/7, Телефон/факс: +7 727 355 35 50

Manufacturing date:

The manufacturing date is defined by the serial number.

```
CCSYWWZZZZ (product serial number format)
      │ │
      │ └── WW = Week of manufacture (calendar week)
      │
      Y = Year of manufacture (decade, year)
```
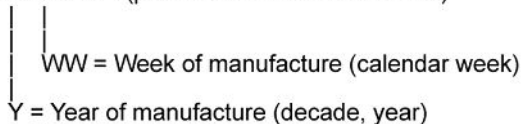
If you need help identifying the manufacturing date, contact **tre@hpe.com**.

Turkey RoHS material content declaration

Türkiye Cumhuriyeti: AEEE Yönetmeliğine Uygundur

Ukraine RoHS material content declaration

Обладнання відповідає вимогам Технічного регламенту щодо обмеження використання деяких небезпечних речовин в електричному та електронному обладнанні, затвердженого постановою Кабінету Міністрів України від 3 грудня 2008 № 1057

Federal Communications Commission notice for Class B equipment

This device complies with part 15 of the FCC Rules. Operation is subject to the following conditions:

- This device may not cause harmful interference.

- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/ TV technician for help.

This equipment complies with radio frequency (RF) exposure limits adopted by the Federal Communications Commission for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

Changes or modifications not expressly approved by the party responsible for compliance could void the authority of the user to operate the equipment.

European Union (CE) compliance

Table 1: Intel AC 9260 module

Operating frequency band	Maximum radio frequency (RF) power transmitted (dBm, EIRP)
Bluetooth	9.5
BLE	5.5
WLAN 2.4 GHz	20
WLAN 5 GHz	23

Table 2: EM7565 module

Operating frequency band	Maximum radio frequency (RF) power transmitted (dBm, conducted)
LTE bands	
Bands 1, 2, 3, 4, 5, 8, 9, 12, 13, 18, 19, 20, 26, 28, 66	24
Bands 7, 41, 42, 43	23.8
Band 30	23
UMTS bands	
Band 1 (IMT 2100 12.2 kbps)	24
Band 2 (UMT 1900 12.2 kbps)	24
Band 3 (UMT 1800 12.2 kbps)	24
Band 4 (AWS 1700/2100 12.2 kbps)	24
Band 5 (UMT 850 12.2 kbps)	24
Band 6 (UMT 800 12.2 kbps)	24
Band 8 (UMT 900 12.2 kbps)	24
Band 9 (UMT 1700 12.2 kbps)	24
Band 19 (UMT 800 12.2 kbps)	24

⚠ **WARNING:** Risk of explosion if a battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

RF exposure information (MPE)

This device meets the EU requirements and the International Commission on Non-Ionizing Radiation Protection (ICNIRP) on the limitation of exposure of the general public to electromagnetic fields by way of health protection. This equipment should be installed and operated to ensure a minimum of 20 cm spacing to any person at all times.

Hereby, Hewlett Packard Enterprise declares that the radio equipment type used in the system is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address:

www.address.com/DoC.pdf

The European Union WEEE Directive Page is available at: **http://h20564.www2.hpe.com/portal/site/hpesc/public/kb/docDisplay/?docId=c03471072**.

Waste Electrical and Electronic Equipment (WEEE)

This symbol means that according to local laws and regulations your product and/or its battery shall be disposed of separately from household waste. When this product reaches its end of life, take it to a collection point designated by local authorities. Proper recycling of your product will protect human health and the environment.

Canada, Industry Canada (IC) Notices

Class B digital circuitry of this device complies with Canadian ICES-3(B)/NMB-3(B).

This device complies with Industry Canada license-exempt RSS standards. Operation is subject to the following conditions:

1. This device may not cause interference.

2. This device must accept any interference, including interference that may cause undesired operation of the device.

Under Industry Canada regulations, the radio transmitters in this device may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than what is necessary for successful communication.

⚠ **WARNING:**

1. The device for operation in the band 5,150 MHz to 5,250 MHz is only for indoor use to reduce the potential for harmful interference to cochannel mobile satellite systems.

2. The maximum antenna gain permitted for devices in the bands 5,250 MHz to 5,350 MHz and 5,470 MHz to 5,725 MHz shall comply with the e.i.r.p. limit.

3. The maximum antenna gain permitted for devices in the band 5,725 MHz to 5,825 MHz shall comply with the e.i.r.p. limits specified for point-to-point and non point-to-point operation as appropriate.

4. Users should also be advised that high-power radars are allocated as primary users (that is, priority users) of the bands 5,250 MHz to 5,350 MHz and 5650-5850 MHz and that these radars could cause interference and damage to LE-LAN devices, or both.

Radio Frequency (RF) Exposure Information

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

This device and its antennas must not be colocated or operating in conjunction with any other antenna or transmitter.

This device has been certified for use in Canada. Status of the listing in the Industry Canada REL (Radio Equipment List) can be found at the following website:

http://www.ic.gc.ca/app/sitt/reltel/srch/nwRdSrch.do?lang=eng

Additional Canadian information on RF exposure can also be found at the following website:

http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08792.html

Canada, avis d'Industry Canada (IC)

La circuiterie numérique de Classe B cet appareil est conforme à la norme canadienne ICES-3(B)/NMB-3(B).

Cet appareil est conforme aux normes d'exemption de licence RSS d'Industry Canada.

Son fonctionnement est soumis aux deux conditions suivantes:

1. Cet appareil ne doit pas causer d'interférence.

2. Cet appareil doit accepter toute interférence, notamment les interférences qui peuvent affecter son fonctionnement.

Conformément aux réglementations d'Industry Canada, les émetteurs radio de cet appareil ne peuvent fonctionner qu'à l'aide d'une antenne dont le type et le gain maximal (ou minimal) pour ces émetteurs - transmetteurs sont approuvés par Industry Canada. Pour réduire le risque d'interférence éventuelle pour les autres utilisateurs, le type et le gain de l'antenne doivent être choisis de manière à ce que la puissance isotrope rayonnée é quivalente (p.i.r.e.) minimale nécessaire à une bonne communication soit fournie.

⚠️ **WARNING:**

1. Les dispositifs fonctionnant dans la bande 5 150 MHz - 5 250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux

2. Le gain maximal d'antenne permis pour les dispositifs utilisant les bandes 5 250 MHz - 5 350 MHz et 5 470-5 725 MHz doit se conformer à la limite de p.i.r.e.

3. Le gain maximal d'antenne permis (pour les dispositifs utilisant la bande 5 725 MHz -5 825 MHz) doit se conformer à la limite de p.i.r.e. spécifiée pour l'exploitation point à point et non point à point, selon le cas.

4. Les utilisateurs devraient aussi être avisés que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5 250-5 350 MHz et 5 650-5 850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.

Informations sur l'exposition à la fréquence radio (FR)

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

Cet appareil est homologué pour l'utilisation au Canada. Pour consulter l'entrée correspondant à l'appareil dans la liste d'équipement radio (REL - Radio Equipment List) d'Industry Canada, rendez-vous sur:

http://www.ic.gc.ca/app/sitt/reltel/srch/nwRdSrch.do?lang=eng

Pour des informations canadiennes supplémentaires sur l'exposition FR, rendez-vous sur:

http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08792.html

Japanese certification mark for 3G module

R 005-100267
T AD12-0318001
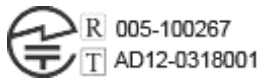
People's Republic of China power input cord

⚠️ **CAUTION:** The input cable is not supplied with this equipment; please contact your supplier. For all other cases, please use an input cable that matches the DC voltage and current rating which complies with the safety standard of your particular country/region.

Specifications

Environmental specifications

Specification	Value
Temperature range[1]	—
Operating	0°C to 70°C (32°F to 158°F) with 0.7 m/s air flow with extended temperature components
	0°C to 40°C (32°F to 104°F) with 0.7 m/s air flow with commercial grade components
Non-operating	-40°C to 85°C (-40°F to 185°F)
Relative humidity (noncondensing)	95% relative humidity at 40°C

[1] All temperature ratings shown are for sea level. An altitude derating of 1.0°C per 304.8 m (1.8°F per 1000 ft) to 3048 m (10,000 ft) is applicable. No direct sunlight allowed. Maximum rate of change is 20°C per hour (36°F per hour).

Mechanical specifications

Specification	Value
Length	23.2 cm (9.13 in)
Depth	10.4 cm (4.09 in)
Width	20.05 cm (7.89 in)
Weight	4.9 kg (10.8 lb)

Power supply specifications

Specification	Value
Rated input voltage	9 to 36 VDC (1.5 KV isolated)
Rated input frequency	>10.9V for full power
Rated input current	~18 A (@ 12 VDC)
Power Adapter output	
Rated output voltage	12 VDC
Rated output current	8 A

Power consumption specifications

Specification	Value
Typical	70 W
Maximum	160 W with full load

Websites

General websites

Hewlett Packard Enterprise Information Library

www.hpe.com/info/EIL

Hewlett Packard Enterprise Edgeline Documentation

www.hpe.com/info/edgeline-docs

Hewlett Packard Enterprise Edgeline Information

www.hpe.com/info/edgeline

Support and other resources

Accessing Hewlett Packard Enterprise Support

- For live assistance, go to the Contact Hewlett Packard Enterprise Worldwide website:

  https://www.hpe.com/info/assistance

- To access documentation and support services, go to the Hewlett Packard Enterprise Support Center website:

  https://www.hpe.com/support/hpesc

Information to collect

- Technical support registration number (if applicable)

- Product name, model or version, and serial number

- Operating system name and version

- Firmware version

- Error messages

- Product-specific reports and logs

- Add-on products or components

- Third-party products or components

Accessing updates

- Some software products provide a mechanism for accessing software updates through the product interface. Review your product documentation to identify the recommended software update method.

- To download product updates:

  Hewlett Packard Enterprise Support Center

  https://www.hpe.com/support/hpesc

  Hewlett Packard Enterprise Support Center: Software downloads

  https://www.hpe.com/support/downloads

  My HPE Software Center

  https://www.hpe.com/software/hpesoftwarecenter

- To subscribe to eNewsletters and alerts:

  https://www.hpe.com/support/e-updates

- To view and update your entitlements, and to link your contracts and warranties with your profile, go to the Hewlett Packard Enterprise Support Center **More Information on Access to Support Materials** page:

  https://www.hpe.com/support/AccessToSupportMaterials

> **IMPORTANT:** Access to some updates might require product entitlement when accessed through the Hewlett Packard Enterprise Support Center. You must have an HPE Passport set up with relevant entitlements.

Remote support

Remote support is available with supported devices as part of your warranty or contractual support agreement. It provides intelligent event diagnosis, and automatic, secure submission of hardware event notifications to Hewlett Packard Enterprise, which will initiate a fast and accurate resolution based on your product's service level. Hewlett Packard Enterprise strongly recommends that you register your device for remote support.

If your product includes additional remote support details, use search to locate that information.

Remote support and Proactive Care information

HPE Get Connected

> **https://www.hpe.com/services/getconnected**

HPE Proactive Care services

> **https://www.hpe.com/services/proactivecare**

HPE Datacenter Care services

> **https://www.hpe.com/services/datacentercare**

HPE Proactive Care service: Supported products list

> **https://www.hpe.com/services/proactivecaresupportedproducts**

HPE Proactive Care advanced service: Supported products list

> **https://www.hpe.com/services/proactivecareadvancedsupportedproducts**

Proactive Care customer information

Proactive Care central

> **https://www.hpe.com/services/proactivecarecentral**

Proactive Care service activation

> **https://www.hpe.com/services/proactivecarecentralgetstarted**

Warranty information

To view the warranty information for your product, see the links provided below:

HPE ProLiant and IA-32 Servers and Options

> **https://www.hpe.com/support/ProLiantServers-Warranties**

HPE Enterprise and Cloudline Servers

> **https://www.hpe.com/support/EnterpriseServers-Warranties**

HPE Storage Products

> **https://www.hpe.com/support/Storage-Warranties**

HPE Networking Products

> **https://www.hpe.com/support/Networking-Warranties**

Regulatory information

To view the regulatory information for your product, view the *Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products*, available at the Hewlett Packard Enterprise Support Center:

https://www.hpe.com/support/Safety-Compliance-EnterpriseProducts

Additional regulatory information

Hewlett Packard Enterprise is committed to providing our customers with information about the chemical substances in our products as needed to comply with legal requirements such as REACH (Regulation EC No 1907/2006 of the European Parliament and the Council). A chemical information report for this product can be found at:

https://www.hpe.com/info/reach

For Hewlett Packard Enterprise product environmental and safety information and compliance data, including RoHS and REACH, see:

https://www.hpe.com/info/ecodata

For Hewlett Packard Enterprise environmental information, including company programs, product recycling, and energy efficiency, see:

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