

### Overview

#### HPE Edgeline EL4000 System

HPE Edgeline EL4000 is one of the industry's first "Converged Edge Systems" – integrating unprecedented levels of edge compute, precision data capture and control, data center class security, device and systems managements, as well as large and blazingly fast storage capability – all in one converged box. This rugged and compact system is designed to perform in harsher edge environments with higher shock, vibration and temperature levels. It is perfect for expanding your IoT infrastructure beyond traditional data center confines and can also help break cloud vendor lock-in to enable true edge computing.

HPE Edgeline Converged Edge Systems are also designed to greatly accelerate the speed at which IoT data can be acquired, analyzed and actioned upon. This enables your business to make real-time decisions that can add value to your operations and result in better business outcomes. This is achieved through three points of convergence in one box:

##### **1. Unprecedented deep edge compute and high capacity storage based on open standards**

Traditional data center or cloud solutions for IoT require data to be transferred from the edge – exposing them to potential issues of latency, bandwidth, cost, security, duplication, corruption and compliance. HPE Edgeline Converged Edge Systems can acquire data with precision, analyze it on an industry-standard x86 deep compute platform with GPU Accelerators, drive high-performance Human Machine Interface (HMI) displays for operators and initiate control actions from the edge itself, in real-time, removing transfer issues and resulting in faster insights for better business agility.

The HPE Edgeline EL4000 System runs unmodified enterprise-class analytics software such as HPE Vertica, and each server is engineered to deliver very high performance. For example, The HPE EL4000 can ingest, repair and load millions of Smart Meter datasets per second, with just nanoseconds of latency. That's the equivalent performance of a typical 2-processor rack server, yet the EL4000 is out at the edge!

The slim, 1U HPE Edgeline EL4000 Converged Edge System can be configured with a combination of one to four HPE ProLiant m510 (Intel® Xeon® D – 8 or 16 core) or HPE ProLiant m710x (Intel® Xeon® E3 – 4 core with workstation-class GPU) compute nodes. Solid State Drive (SSD) options in the M.2 form factor with different interface types (SATA or NVMe), can also be selected to help deliver the perfect balance between cost efficiency and extreme storage performance.

##### **2. Unique integration of precision data acquisition, measurement and control systems based on open standards**

The I/O capabilities of HPE Edgeline EL4000 Converged Edge System is built on open industry standards such as PCI Express and PXIe. Select models also include a wide variety of option I/O cards to support 10-40 Gb Ethernet, InfiniBand or Fiber Channel.

Precision data capture and control capabilities are achieved through open PXI standards, and when coupled with automated machine learning, they open up new horizons for equipment monitoring and management, predictive analytics to detect impending failures and augmented reality for manual-less servicing – key facets of Smart Factory initiatives such as Industry 4.0.

The HPE Edgeline EL4000 also supports I/O expansion using up to four PCIe cards (one per compute node) or up to four PXIe modules (one to four assignable to any compute node). A choice of two switched 10Gb (SFP+) or two pass-through 4x10Gb (QSFP+) network uplink ports is also available.

## Overview

### 3. Data center class security, device and remote systems management

HPE Edgeline Converged Edge Systems bring our industry leading HPE Integrated Lights Out (iLO) systems management and security technology to the edge – the exact same HPE iLO found in our industry standard HPE ProLiant servers used in traditional datacenters. A single HPE iLO RJ45 management Ethernet port enables you to deploy, monitor and support your HPE Edgeline EL4000 System - even when it's located at a remote site.

The HPE Edgeline EL4000 is also fully compatible with popular IoT security solutions for protection in high-risk edge environments. Aruba ClearPass enables custom profiles to be created to identify and secure IoT devices. Through real-time interaction with third party security solutions, ClearPass offers automated threat protection and recovery for devices that represent risk, with minimal hands-on IT interaction required. Aruba Virtual Intranet Access (VIA) enables seamless Virtual Private Network (VPN) tunnels for secure connectivity between edge locations and the corporate network.

HPE Edgeline Converged Edge Systems have a modular design that enables easy subsystem replacements and upgrades.

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#### HPE Edgeline – Engineered for Edge Environments

The HPE Edgeline EL4000 Converged Edge System is designed to reside where the data is created, often in environmentally harsh, space-constrained and/or dusty environments. This compact, ruggedized system is designed to withstand increased shock and vibration, and can also tolerate high ambient operating temperatures up to 55°C (131°F) – well beyond what traditional servers can typically endure. Telco specific options such as NEBS Level 3 certification, are also available. When floor space options are limited, a wide range of wall, rack, or shelf mounting options open up a multitude of placement possibilities. Finally, you can easily connect HPE Edgeline Converged Edge Systems to your electrical infrastructure by selecting AC or -48V DC hot-pluggable power supplies.

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#### HPE Edgeline – It's more than just IoT!

##### Powering the Intelligent Workspace at the Enterprise Edge

When coupled with Citrix technology, the HPE Edgeline EL4000 Converged Edge System is a perfect solution for secure, simple, smart and scalable delivery of applications, desktops and user data at the enterprise edge. This solution enables your enterprise or SMB to enhance worker productivity from anywhere, at any time, from any device. Take advantage of HPE's world-class data center technology at the enterprise IT edge with HPE ProLiant m710x compute nodes to enable workstation-class graphics, accelerated desktops and rich applications. Or use HPE ProLiant m510 compute nodes to support up to 660 office workers, using just 0.61W of power per user. Have a specific need? This proven mobility solution can be scaled and adapted to meet your specific needs to enable you to take advantage of the same benefits of security, compliance and system performance found in traditional datacenters.

##### Processing and Caching of Rich Media at the Media Edge

The HPE Edgeline EL4000 Converged Edge System provides a high performance, easy to manage platform for Multiple System Operators (MSO) and Over-The-Top (OTT) providers to enable processing, integration and caching of video, audio and other rich media content nearer to the consumer. It also helps perform compute and bandwidth intensive tasks, such as video transcoding and caching at the media edge site (e.g. a distribution center in a building/town). This greatly reduces demand on the core network back to the datacenter and improves responsiveness for content consumers. Configure your ruggedized system with HPE ProLiant m710x compute nodes to enjoy up to 108 AVC/h.264 (1080p @ 30fps) or 8 HEVC/h.265 (4K @ 60fps) simultaneous hardware accelerated video transcodes. Then, cache the data using high-performance memory and SSDs on the HPE ProLiant m510 compute nodes to deliver a superior and differentiated experience to your end users.

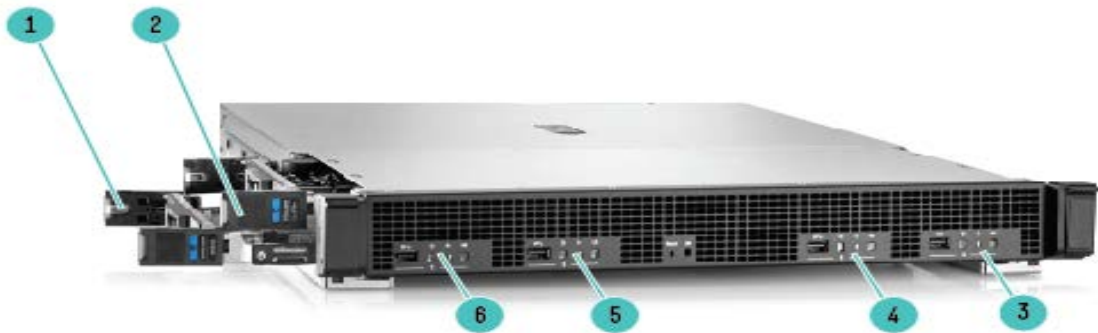
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Overview



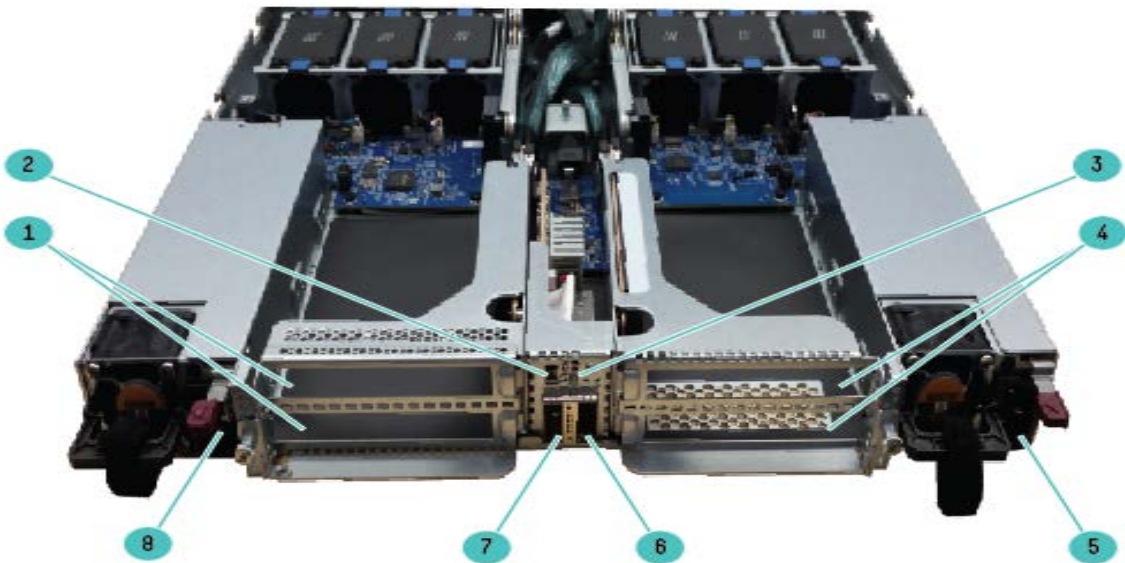
HPE Edgeline EL4000 Front View

Item	Description
1.	USB 2.0 Port
2.	Server Cartridge Power LED/Button
3.	Server Cartridge Health LED
4.	Server Cartridge UID LED
5.	Management Reset Button (Pinhole)
6.	Chassis System Health LED
7.	HPE ProLiant server cartridge 3
8.	HPE ProLiant server cartridge 4



Item	Description
1.	HPE ProLiant server cartridge 2
2.	HPE ProLiant server cartridge 1
3.	Cartridge 4 lights indicator
4.	Cartridge 3 lights indicator
5.	Cartridge 2 lights indicator
6.	Cartridge 1 lights indicator

Overview



HPE Edgeline EL4000 Rear View

Item	Description
1.	Two (2) PCIe I/O Card Slots -or- PXle# modules (3 – Top, 4- Bottom)
2.	iLO Network Port – 1GbE RJ45
3.	Chassis UID Indicator
4.	Two (2) PCIe I/O Card Slots -or- PXle# modules (1 – Top, 2- Bottom)
5.	Power Supply 1
6.	Network Port B* - 10GbE SFP+ or 4x10GbE QSFP+
7.	Network Port A* - 10GbE SFP+ or 4x10GbE QSFP+
8.	Power Supply 2

**NOTES:** \* Network connections are available in 10GbE SFP+ (switched) or 4x10GbE QSFP+ (pass-thru). Only the 10GbE SFP+ option is shown.  
\* PXle model has Two 10GbE SFP+ (switched) ports on the front of the chassis instead of the rear.

## Standard Features

### Enclosure

The HPE Edgeline EL4000 System holds 1-4 HPE ProLiant server cartridges (supported types are listed in this document). The base system is available in a variety of models:

- 1) PCIe I/O with 10GbE Switched networking
- 2) PCIe I/O with 10GbE Pass-Through networking
- 3) PXIe modules with 10GbE Switched networking<sup>#</sup> (Data Capture and Control)

The EL4000 v1 PCIe models support 1-4 Full-Height Half-Length PCIe I/O cards (x16 physical) – 1 I/O card connected to each installed server.

The EL4000 v2 PCIe models are designed to support 1-4 Full-Height Half Length PCIe I/O cards (x16 physical) with higher wattaged requirements (i.e up to 75w) such as HPE NVIDIA P4 Graphic Accelerator (SKU# Q0V79A). Each of the PCI cards connect to each installed server.

The PXI model<sup>#</sup> supports 1-4 PXIe modules, one or more of which can be allocated to 1-4 installed servers for precision data capture and control.

The core network can be Layer 2 switched or pass-through depending on the system option selected. A separate 1G RJ45 network port is provided for access to the iLO management network.

All HPE Edgeline EL4000 models support 4 ports for USB 3.0 (1 for each installed server). Six non-hot swappable fans are used for cooling airflow, with an optional dust filter. Two redundant HPE Flex Slot power supplies can be installed per system.

The HPE Edgeline EL4000 System is rated for extended operating temperatures of up to 55°C, which allows it to be located in environments unsuitable for traditional servers. It is also compliant with ASHRAE Class A3 and A4 specifications and will be NEBS Level 3 certified.

**NOTE:** Actual allowable system operating temperature will be determined by the options (I/O cards, drives etc.) selected. Refer to the appendix for details.

<sup>#</sup> Launching in 2017

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### Server Cartridges

HPE Edgeline EL4000 System uses proven HPE ProLiant server cartridges from the HPE Moonshot family. One (1) to Four (4) modular hot-pluggable servers of a supported type can be installed in each system. Examples:

- HPE ProLiant m510 Server (Intel® Xeon® D – 8 or 16 cores, up to 128GB RAM)
- HPE ProLiant m710x Server (Intel® Xeon® E3 – 4 cores with GPU, up to 64GB RAM)

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### HPE Flexible Slot Power Supply

HPE Flexible Slot (Flex Slot) Power Supplies share a common electrical and physical design that allows for hot plug, tool-less installation into HPE ProLiant servers. HPE's Flex Slot power supplies are certified for high-efficiency operation and offer multiple power output options, allowing users to "right-size" a power supply for specific server configurations. This flexibility helps to reduce power waste, lower overall energy costs, and avoid "trapped" power capacity in the data center.

The HPE Edgeline EL4000 system supports 1-2 HPE Flex Slot power supplies in a 1+1 redundant configuration (both AC and DC input options are available).

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## Standard Features

### Embedded Management

The HPE ProLiant server cartridge plugged into a HPE Edgeline EL4000 has its own iLO 4 management processor, which can be accessed directly through the management network.

The HPE Edgeline EL4000 System implements a light-weight chassis controller to monitor and control common chassis elements. The iLO4 on the server cartridge communicates with the Chassis Controller to gather and report status information on the chassis itself.

Monitor your servers for ongoing management, service alerting, reporting and remote management with HPE iLO. Learn more at <http://www.hpe.com/info/ilo>.

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### HPE Edgeline Component Pack

The HPE Edgeline Component Pack, is the delivery mechanism for firmware updates on the HPE Edgeline System. Before using your system for the first time, verify that you have the latest drivers, firmware, and system software installed. Update your system with the Edgeline Component Pack.

For more information, see the Edgeline Component Pack Update Guide on the Hewlett Packard Enterprise website: <http://www.hpe.com/info/edgeline-docs>

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### Warranty

This product is covered by a global limited warranty and supported by Hewlett Packard Enterprise Services and a worldwide network of Hewlett Packard Enterprise Authorized Partner Ready Resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for initial setup is available for 90 days from date of purchase. Enhancements to the warranty services are available through HPE services or customized service agreements. Hard drives have either a one year or three-year warranty; refer to the specific hard drive QuickSpecs for details.

**NOTE:** Chassis Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support. Additional information regarding worldwide limited warranty and technical support is available at: <http://h20564.www2.hpe.com/hpsc/wc/public/home>

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## Additional Fetures

### HPE Insight Cluster Management Utility

HPE Insight Cluster Management Utility (CMU) is an Hewlett Packard Enterprise-licended and Hewlett Packard Enterprise-supported suite of tools that are used to manage large-scale systems. Insight CMU includes software for the centralized provisioning, management and monitoring of nodes. Insight CMU makes the administration of clusters more user friendly, efficient, and error free than if they were being managed by scripts, or on a node-by-node basis. For more information on Hewlett Packard Enterprise Insight Cluster Management Utility, please contact your sales representative or go to:

<https://www.hpe.com/us/en/product-catalog/detail/pip.3296361.html#>

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### HPE StoreVirtual VSA

HPE StoreVirtual VSA Software provides complete storage array functionality for virtualized environments without the need for external array hardware. Built on proven technology, HPE StoreVirtual VSA delivers software-defined storage by virtualizing up to 50TB of disk capacity on a server running VMware vSphere, Microsoft Hyper-V or Linux KVM. The HPE StoreVirtual VSA eliminates the need for external shared storage required to implement advanced hypervisor features. For more details refer to:

<https://www.hpe.com/us/en/storage/storevirtual.html>

**NOTE:** A free 1TB StoreVirtual license is available with the purchase of any Intel® Xeon® based server cartridge. For details on this offer refer to:

<https://www.hpe.com/us/en/storage/storevirtual.html>

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### Factory Express Portfolio for Servers and Storage

HPE Factory Express offers configuration, customization, integration and deployment services for Hewlett Packard Enterprise servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed.

Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as asset tagging, and custom packaging. Hewlett Packard Enterprise products supported through Factory Express include a wide array of servers and storage: HPE Moonshot, HPE Integrity, HPE ProLiant, HPE ProLiant Server Blades, and HPE BladeSystem, HPE 9000 servers as well as the MSAxxxx, VA7xxx, EVA, XP, rackable tape libraries and configurable network switches.

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## Service and Support

### Services and Support

#### HPE Technology Services

HPE Technology Services delivers confidence, reduces risk and helps customers realize agility and stability.

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#### Protect your business beyond warranty with HPE Services

HPE Services enable you to order the right service level, length of coverage and response time as you purchase your new server, giving you full entitlement for the selected support.

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#### Recommended HPE Services for your HPE Product

(4 and 5 year Service offerings are also available)

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### Optimized Care

#### Foundation Care 24x7, three-year Service

HPE Foundation Care 24x7 connects you to Hewlett Packard Enterprise 24 hours a day, seven days a week for assistance on resolving issues. Hardware onsite response within four hours if needed. Collaborative software included in this service provides troubleshooting assistance on industry leading software running on your HPE server. Simplify your support experience and make Hewlett Packard Enterprise your first call for hardware or software questions.

<https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en>

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### Standard Care

#### Foundation Care NBD, three-year Service

HPE Foundation Care Next Business Day (NBD) gives you support during business hours for assistance on resolving issues – features next business day hardware onsite response if needed and software with a call back within two hours. Collaborative software support is included and provides troubleshooting assistance on industry leading software running on your HPE server. Simplify your support experience and make Hewlett Packard Enterprise your first call for hardware or software questions.

<https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en>

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### Related Services

#### HPE Edgeline Installation & Startup Service

HPE Installation and Startup Service for the Edgeline System provides for the installation of one system and its associated ProLiant servers, as well as operating system deployment and basic configuration of OS network parameters to establish network connectivity

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#### HPE Datacenter Care service

HPE Datacenter Care helps you improve IT stability and security, increase the value of IT, and enable agility and innovation. It is a structured framework of repeatable, tested, and globally available services “building blocks.” You can deploy, operate, and evolve your datacenter wherever you are on your IT journey. With HPE Datacenter Care, you benefit from a personalized relationship with Hewlett Packard Enterprise via a single point of accountability for Hewlett Packard Enterprise and others’ products. For more information, visit

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

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## Service and Support

### HPE Self-Service Spares Service

HPE Self-Service Spares Service answers the question: What do you do when you need parts? We can set it up so that you get spare parts onsite through our automated self-service spares. You simply go to the part of your data center where the parts live, scan them out, scan in the broken one, and you're done. We maintain your inventory of good spares, so that what you need is ready to go when you need it. And we provide monthly service excellence reports illustrating onsite inventory performance.

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### Defective Media Retention (DMR) and Comprehensive Defective Material Retention (CMDR)

your business deals with sensitive or legally protected data, you know that it's not a simple matter to return a defective hardware component, but keeping it conflicts with the terms and conditions of many standard warranty agreements. If you don't return the component, you'll be charged for the replacement part.

HPE Foundation Care services are available with defective media retention or comprehensive defective material retention of those other data-retentive components, such as hard drives, memory, switches and processors. This is critical for customers who:

- Need to control and secure their classified, proprietary and confidential data.
- Are subject to current data privacy regulations.
- Want a simpler, more cost-effective solution when choosing not to return a malfunctioning disk drive or other data retentive component.

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## Other Services

**HPE Technology Services Support Credits** offer flexible services and technical skills to meet your changing IT demands. With a menu of services tailored to suit your needs, you get additional resources and specialist skills to help you maintain peak performance of your IT with technical and operational services. There is even a custom deliverable where we work with you to develop exactly what meets your needs. Offered as annual credits, you can plan your budgets while proactively responding to your dynamic business.

**HPE Education Services** keep your IT staff trained making sure they have the right skills to deliver on your business outcomes. Book on a class today and learn how to get the most from your technology investment. <http://www.hpe.com/ww/learn>

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### HPE Support Center

Hewlett Packard Enterprise provides several tools that make it simpler to get help from Hewlett Packard Enterprise:

HPE Support Center is personalized online support portal with access to information, tools and experts to support Hewlett Packard Enterprise business products. Submit support cases online, chat with Hewlett Packard Enterprise experts, access support resources or collaborate with peers. Learn more: <http://www.hpe.com/support/hpesc>

The HPE Support Center Mobile App allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalize IT support anywhere, anytime. HPE Support Center are available at no additional cost with a Hewlett Packard Enterprise warranty, HPE support package or Hewlett Packard Enterprise contractual support agreement.

**NOTE:** HPE Support Center Mobile App is subject to local availability.

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### For more information

To learn more on HPE Edgeline System, please contact your Hewlett Packard Enterprise sales representative.

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### Parts and Materials

Hewlett Packard Enterprise will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.

## Service and Support

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product QuickSpecs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction.

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## Configuration Information – Factory Integrated Models

**HPE Recommended Options** have the best performance, value and availability.

**Recommended Options** have been selected by Hewlett Packard Enterprise experts to provide the right technology for a range of workloads and market segments. Fully integrated into the ProLiant management and security experience, Recommended Options provide the best fit with timely availability. **[View the list for your region.](#)**

**Extended Options** provide an extended catalog of products tailored for customers in specific markets or with specific workloads, requiring the utmost in performance or value. Fully integrated into the ProLiant management and security experience, Extended Options represent great value and performance but typically have a longer lead-time.

### NOTES:

This section lists some of the steps required to configure a Factory Integrated Model. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of a Hewlett Packard Enterprise approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.

Factory Integrated Models must start with an HPE Edgeline EL4000 System. Each HPE Edgeline System requires the following minimum configuration:

- One (1) HPE ProLiant Server Cartridge
- One (1) HPE Flex Slot Power Supply

Networking (10G switched or pass-through) and option I/O type (PCIe or PXIe currently) cannot be changed once the HPE Edgeline EL4000 system has been ordered. However, the server cartridge, I/O cards can be replaced.

### Step 1: Base Configuration (Choose System)

#### HPE Edgeline System

HPE Edgeline EL4000 10GbE Switch System	847535-B21
HPE Edgeline EL4000 10GbE 2xSFP+ v2 Switch System	879808-B21
HPE Edgeline EL4000 4x10GbE 2xQSFP+ Pass Thru System	847534-B21
HPE Edgeline EL4000 4x10GbE 2xQSFP+ v2 Pass Thru System	879799-B21
HPE Edgeline EL4000 10GbE 2xSFP+ Switch PXIe System	847536-B21

**NOTE:** v2 models support 4 PCIe cards with wattages up to 75w, allowing up to Qty of 4 HPE NVIDIA P4 GPGPU Cards (SKU# Q0V79A).

### Step 2: Configure ProLiant Server Cartridge

#### HPE ProLiant Server Cartridge

**NOTE:** See [HPE ProLiant Server Cartridge QuickSpecs](#) for Cartridge Configurations

HPE ProLiant m510 Server Cartridge

HPE ProLiant m510-16c Server Cartridge

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c05069171>

HPE ProLiant m710x Server Cartridge

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c05069173>

**NOTE:** Functional systems require atleast 1 server cartridge to be configured

### Step 3: Choose Required Power Options

#### Power Supplies

#### HPE Flex Slot Power Supplies (Min:1, Max:2)

HPE 800W Flex Slot Platinum Hot Plug Power Supply Kit (Recommended)

720479-B21

HPE 800W Flex Slot -48VDC Hot Plug Power Supply Kit (Recommended)

720480-B21

### NOTES:

1. Refer to the [HPE Flexible Slot Power Supply QuickSpecs](#) for additional information:

<https://www.hpe.com/h20195/v2/GetDocument.aspx?docname=c04346217>

## Configuration Information – Factory Integrated Models

2. Functional systems require atleast 1 power supply to be configured. Two (2) redundant power supplies are supported per system.
3. All x86 server cartridges support power-capping.

### Step 4: Choose Factory Integration Options

**NOTE:** Some options are not orderable currently and are listed with a targeted release date for planning purposes only. HPE reserves the right to revise these options prior to release.

#### HPE PCIe I/O

##### Standard PCIe I/O Options

**NOTE:** Power limit is 75W per card in a PCIe x16 physical slot (x8 Gen3 electrical). Only Full-Height Half-Length (FHHL) and smaller cards are supported.

**NOTE:** Each PCIe card is assigned to one server cartridge. The quantity of PCIe cards ordered cannot exceed the numbers of servers configured in the EL4000 system.

#### HPE PCIe Storage

HPE H241 12Gb 2-ports Ext Smart Host Bus Adapter (Recommended) 726911-B21

**NOTES:** This controller does not support a cache or battery, or connection to internal drives. Secure Encryption is supported with an additional license purchase. Refer to the Smart Array H241 controller documentation for technical details:

<https://www.hpe.com/h20195/v2/gethtml.aspx?docname=c04346305>

#### HPE Networking

HPE Ethernet 10/25Gb 2-port 640SFP28 Adapter (Recommended) 817753-B21

HPE BladeSystem c-Class Virtual Connect 1G SFP SX Transceiver (Recommended) 453151-B21

HPE BladeSystem c-Class Virtual Connect 1G SFP RJ-45 Transceiver (Recommended) 453154-B21

HPE BladeSystem c-Class 10Gb SFP+ SR Transceiver (Recommended) 455883-B21

HPE X120 1G SFP RJ45 T Transceiver JD089B

#### HPE GPU Accelerator

HPE NVIDIA Tesla P4 8GB Computational Accelerator (Recommended) Q0V79A

#### HPE InfiniBand

HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter (Recommended) 764284-B21

HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter (Recommended) 872726-B21

## Additional Options

**HPE Recommended Options** have the best performance, value and availability.

**Recommended Options** have been selected by Hewlett Packard Enterprise experts to provide the right technology for a range of workloads and market segments. Fully integrated into the ProLiant management and security experience, Recommended Options provide the best fit with timely availability. **View the list for your region.**

**Extended Options** provide an extended catalog of products tailored for customers in specific markets or with specific workloads, requiring the utmost in performance or value. Fully integrated into the ProLiant management and security experience, Extended Options represent great value and performance but typically have a longer lead-time.

### Choose Additional Options

**NOTE:** Some options may not be integrated at the factory. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of a Hewlett Packard Enterprise approved configurator. Contact your local sales representative for additional information.

**NOTE:** Some options are not orderable currently and are listed with a targeted release date for planning purposes only. HPE reserves the right to revise these options prior to release.

#### Rail Kit

HPE Edgeline EL4000 Short Rack Rail Kit 868575-B21

**NOTE:** The Short Rack Rail kit is for a standard (19" wide) server rack, but only extends half of the Edgeline system depth. This rail is adjustable for rack depths of 22" - 34.5".

HPE Edgeline EL4000 Full Rack Rail Kit 868577-B21

**NOTE:** The Full Rack Rail kit is for a standard (19" wide) server rack, and extends the entire depth of the Edgeline system. This rail is adjustable for rack depths of 24" - 36". This kit does not come with a Cable Management Arm (CMA), which must be ordered separately.

HPE 1U Cable Management Arm for Rail Kit (Recommended) 734811-B21

**NOTE:** The optional Cable Management Arm (CMA) requires a Full Rack Rail kit to be ordered.

HPE Edgeline EL4000 Wall Rack Kit Third-Party

**NOTE:** This third-party (non HPE) kit allows up to 2 Edgeline EL4000 systems to be installed on a wall. For more details contact RackSolutions® and request P/N 101-5302:

<http://www.racksolutions.com/>

#### Cable Kits

HPE Edgeline EL1000/EL4000 System Console USB to RS232 Cable Kit 871947-B21

##### NOTES:

- The system console kit plugs into the Edgeline USB port corresponding to a server cartridge, and allows serial port access to its boot-time BIOS ROM Based Setup Utility (RBSU) console. The RBSU can be used to set various server configuration parameters such as an iLO Static IP address.
- This cable can also be used for connecting the server to any RS232 compliant serial device (e.g. UPS). In this scenario, BIOS console redirection to serial port should be turned off in RBSU to prevent boot-time messages from going to the attached serial device.
- Sys Console Cbl Kit cable is required in some environments to set static IP as well as other functions when the Edgeline system is present in non DHCP serving environments

HPE m710x Front I/O Cable Kit 867893-B21

##### NOTE:

This optional kit provides the following cables for connecting the HPE ProLiant m710x server directly to a monitor, keyboard, mouse or other accessories.

- Mini Displayport (DP) to Displayport (DP) Female Adapter
- Mini Displayport (DP) to HDMI Adapter
- Micro-USB to USB Type-A Female Adapter (*this cable can also be used with m510 servers*)

Installing this cable will require partial extraction of the EL4000 chassis from the rack to access the server cartridge ports on the sides

## Additional Options

### HPE Embedded Management

#### HPE Integrated Lights Out (iLO) Advanced

HPE iLO Advanced Electronic License with 1yr Support on iLO Licensed Features	E6U59ABE
HPE iLO Advanced Electronic License with 3yr Support on iLO Licensed Features	E6U64ABE
HPE iLO Advanced 1-server License with 1yr Support on iLO Licensed Features	512485-B21
HPE iLO Advanced Flexible Quantity License with 1yr Support on iLO Licensed Features	512486-B21
HPE iLO Advanced AKA Tracking License with 1yr Support on iLO Licensed Features	512487-B21
HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features	BD505A
HPE iLO Advanced Flexible Quantity License with 3yr Support on iLO Licensed Features	BD506A
HPE iLO Advanced AKA Tracking License with 3yr Support on iLO Licensed Features	BD507A

#### NOTE:

1. One (1) optional iLO Advanced license can be ordered for each configured server in the system.
2. iLO Advance Pack for its vMedia/vKVM features is highly recommended, unless the end-user is proficient at doing automated PXE-based network installation of an OS
3. For more details on iLO Advanced, refer to: <http://www.hpe.com/info/ilo>

### HPE Insight Cluster Management Utility (CMU)

HPE Insight Cluster Management Utility Media	BD477A
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**NOTE:** For additional license kits please see the QuickSpecs at:

<https://h20195.www2.hpe.com/v2/default.aspx?cc=uk&lc=en&oid=5227043>

### HPE StoreVirtual VSA

HPE StoreVirtual Free 1TB VSA	VSA1TB-S
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**NOTE:** Get free Software Defined Storage of up to 1TB using HPE StoreVirtual VSA. The free license is available with the order of any Intel® Xeon® based server cartridge. For details on this offer refer to:

<https://h20195.www2.hpe.com/v2/Getdocument.aspx?docname=c04111621>

Full license upgrades to 4TB, 10TB or 50 TB capacities can also be purchased. Refer to the QuickSpecs at: <https://www.hpe.com/h20195/v2/GetPDF.aspx%2Fc04111621.pdf>

### Install and Startup Services

HPE Installation Edgeline 4000 Service	H2EL2E
HPE Installation and Startup Edgeline EL4000 Service	H2US8E

### Support Services

HPE 3 Year Foundation Care Next Business Day Edgeline 4000 Service	H2ED5E
HPE 3 Year Foundation Care 24x7 Edgeline 4000 Service	H2ED8E

**NOTE:** Enhanced Service Level Agreements (SLAs) and 4-year or 5-year support options are also available. See HPE Support Services Central for additional services at: <http://ssc.hpe.com>

### HPE PCIe Accelerators

HPE NVIDIA Tesla P4 8GB Computational Accelerator (Recommended)	Q0V79A
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**NOTE:** The EL4000 v2 Models can support up to Qty 4. This option is not supported on the EL4000 v1

### HPE PCIe Networking Options

#### SFP Options

**NOTE:** Ensure that the Edgeline model with SFP+ ports has been selected before ordering these options

HPE BladeSystem c-Class Virtual Connect 1G SFP SX Transceiver (Recommended)	453151-B21
HPE BladeSystem c-Class Virtual Connect 1G SFP RJ-45 Transceiver (Recommended)	453154-B21

#### SFP+ Options

#### Transceivers

## Additional Options

HPE BladeSystem c-Class 10Gb SFP+ SR Transceiver (Recommended) 455883-B21

### Direct Attach Copper Cables

HPE BladeSystem c-Class 10GbE SFP+ to SFP+ 1m Direct Attach Copper Cable (Extended)	487652-B21
HPE BladeSystem c-Class 10GbE SFP+ to SFP+ 3m Direct Attach Copper Cable (Recommended)	487655-B21
HPE BladeSystem c-Class 10GbE SFP+ to SFP+ 5m Direct Attach Copper Cable (Recommended)	537963-B21
HPE FlexNetwork X240 10G SFP+ to SFP+ 5m Direct Attach Copper Cable	JG081C
HPE B-series SFP+ to SFP+ Active Copper 1.0m Direct Attach Cable (Recommended)	AP818A
HPE B-series SFP+ to SFP+ Active Copper 3.0m Direct Attach Cable (Extended)	AP819A
HPE B-series SFP+ to SFP+ Active Copper 5.0m Direct Attach Cable (Recommended)	AP820A

### QSFP+ Options

#### NOTES:

- Ensure that an Edgeline model with QSFP+ ports has been selected before ordering these options.
- Each of the two QSFP+ ports contain 4x10GbE links, 1 going to each of the 4 server cartridge bays in the chassis. If a server cartridge is not installed, its corresponding 10GbE network links cannot be used.
- The QSFP+ port cannot be aggregated into a single 40GbE link.

### Transceivers

**NOTE:** Due to the QSFP+ port topology on Edgeline, use only the 4x10G transceiver at both the system and Top-of-Rack (ToR)/Core switch sides, and not a standard 1x40G transceiver.

### Direct Attach Copper Cables

**NOTE:** When QSFP+ to QSFP+ copper cables are used, the Top-of-Rack (ToR)/Core switch must be configured as 4x10GbE links on the downlink QSFP+ port.

HPE FlexNetwork X240 40G QSFP+ QSFP+ 1m Direct Attach Copper Cable	JG326A
HPE FlexNetwork X240 40G QSFP+ QSFP+ 3m Direct Attach Copper Cable	JG327A
HPE FlexNetwork X240 40G QSFP+ QSFP+ 5m Direct Attach Copper Cable	JG328A
HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 1m Direct Attach Copper Splitter Cable	JG329A
HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 3m Direct Attach Copper Splitter Cable	JG330A
HPE FlexNetwork X240 40G QSFP+ to 4x10G SFP+ 5m Direct Attach Copper Splitter Cable	JG331A

### HPE Rack Series

**NOTE:** HPE Edgeline systems, in conjunction with an appropriate racking kit option, fit into any HPE rack (including 1200mm deep racks) and most third-party racks

### HPE Advanced Series Racks

#### 600mm Wide Racks

HPE 42U 600mm x 1075mm Kitted Advanced Pallet Rack with Side Panels and Baying	TL253A
HPE 42U 600mm x 1075mm Kitted Advanced Shock Rack with Side Panels and Baying	TL254A

**NOTE:** HPE 14U and 22U Advanced Series Racks include side panels.

**NOTE:** Please see the HPE Advanced Series Racks QuickSpecs for information on additional racks options and rack specifications: <https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04123187>

**NOTE:** Please see the HPE Enterprise Series Racks QuickSpecs for information on additional racks options and rack specifications: <https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04123237>

### HPE Standard Series Rack

HPE V142 1075mm deep Pallet 100 series Rack	AF046S
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**NOTE:** Please see the HPE Enterprise Series Racks QuickSpecs for information on additional racks options and rack specifications: <https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04123338>

## Additional Options

### HPE Rack Options

#### KVM Consoles

##### HPE Rackmount Console Kits

HPE LCD8500 1U US Rackmount Console Kit (Recommended)	AF630A
HPE LCD8500 1U UK Rackmount Console Kit (Extended)	AF631A
HPE LCD8500 1U DE Rackmount Console Kit (Extended)	AF632A
HPE LCD8500 1U FR Rackmount Console Kit (Extended)	AF633A
HPE LCD8500 1U JP Rackmount Console Kit (Recommended)	AF642A
HPE LCD8500 1U RU Rackmount Console Kit (Extended)	AF643A
HPE LCD8500 1U INTL Rackmount Console Kit (Recommended)	AF644A
HPE LCD8500 1U US TAA Rackmount Console Kit (Extended)	AF645A

**NOTE:** The HPE LCD8500 1U Rackmount Console Kit is an ultra-dense, high-performance KVM console that combines a full 18.5-inch LCD monitor with keyboard and touch pad in a 1U form factor. Refer to the QuickSpecs for additional information:

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04154398>

#### HPE KVM Switches

HPE 0x2x16 KVM Server Console Switch G2 with Virtual Media CAC Software (Extended)	AF618A
HPE 0x2x32 KVM Server Console Switch G2 with Virtual Media CAC Software (Extended)	AF619A
HPE 1x1Ex8 KVM IP Console Switch G2 with Virtual Media CAC Software (Extended)	AF620A
HPE 2x1Ex16 KVM IP Console Switch G2 with Virtual Media CAC Software (Extended)	AF621A
HPE 4x1Ex32 KVM IP Console Switch G2 with Virtual Media CAC Software (Extended)	AF622A

**NOTE:** Refer to the HPE KVM Console Switch QuickSpecs for additional information:

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04168373>

HPE KVM Console USB/Display Port Interface Adapter (Recommended)	AF654A
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**NOTE:** This adapter can be used to connect the KVM switch to a video-enabled server cartridge such as the HPE m710x. Appropriate cable kits for USB and Displayport connection to the server must also be ordered E.g. 867893-B21: HPE m710x Front I/O Cable Kit.

**NOTE:** In an Edgeline EL4000 System, connection to the server cartridge video port is from the sides and may require partial extraction of the system from a standard rack.

### HPE Power Distribution Units (PDU)

#### HPE Basic Power Distribution Units (bPDU)

**NOTE:** HPE Basic PDU's provide reliable, low-cost power distribution throughout the rack and are available in both vertical and horizontal form factors to allow for flexible installation in your rack. Please see the QuickSpecs for more information:

<https://www.hpe.com/h20195/v2/gethtml.aspx?docname=c04111392>

#### HPE Intelligent Power Distribution Units (iPDU)

**NOTE:** HPE Intelligent PDU's deliver a unique set of capabilities that not only allow you to meter and switch individual outlets, but also communicate directly with each server to understand and track power usage, configuration, and redundancy information. For more information, please review the QuickSpecs: <https://www.hpe.com/h20195/v2/gethtml.aspx?docname=c04123329>

**NOTE:** Other UPS sizes are also available. Please see the HPE Single Phase UPS QuickSpecs for additional information: <https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04154342>

#### HPE 6 Outlet Intelligent Power Distribution Unit Cores

HPE Intelligent Modular 4.9kVA/L6-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF520A
HPE Intelligent Modular 8.3kVA/CS8265C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF521A
HPE Intelligent Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF522A
HPE Intelligent Modular 3Ph 14.4kVA/CS8365C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF533A
HPE Intelligent Modular 3Ph 17.3kVA/60309 60A 4-wire 48A/208V (6) C19/Horizontal NA/JP PDU	AF523A
HPE Intelligent Modular 7.3kVA/60309 3-wire 32A/230V Outlets (6) C19/Horizontal INTL PDU	AF525A
HPE Intelligent Modular 3Ph 11kVA/60309 5-wire 16A/230V Outlets (6) C19/Horizontal INTL PDU	AF526A
HPE Intelligent Modular 3Ph 22kVA/60309 5-wire 32A/230V Outlets (6) C19/Horizontal INTL PDU	AF527A

#### HPE 12 Outlet Intelligent Power Distribution Unit Cores

HPE Intelligent Modular 3Ph 17.3kVA/IEC 60309 60A 4-wire 48A/208V (12) C19/Horizontal NA/JP PDU	AF535A
HPE Intelligent Modular 3Ph 22kVA/60309 5-wire 32A/230V Outlets (12) C19/Horizontal INTL PDU	AF538A



Additional Options

HPE Intelligent Power Distribution Unit Extension Bar Kits

HPE 5xC13 Intelligent PDU Extension Bar G2 Kit (Recommended) AF547A

**NOTE:** Intelligent Extensions Bars have individually monitored outlets that are also individually switchable for power cycling attached equipment. Each individual C13 outlet has Power Line Communications to support Intelligent Power Discovery when connected to PLC enabled common slot power supplies.

HPE 5xC13 Outlets Power and UID LEDs Pair Standard Extension Bar (Recommended) AF528A

## Technical Specifications

Power Supply Specifications								
Description	HPE 800W Flex Slot Platinum Hot Plug Power Supply Kit							
Part Number	720479-B21							
Input Voltage Range ( V rms )	100-240							
Frequency Range (Nominal) ( Hz )	50-60							
Nominal Input Voltage ( V rms )	100	120	127	200	208	220	230	240
Maximum Rated Output Wattage Rating (Watts)	800	800	800	800	800	800	800	800
Nominal Input Current ( A rms )	9.1	7.5	7.0	4.4	4.2	4.0	3.8	3.7
Maximum Rated Input Wattage Rating ( Watts )	906	891	878	871	870	869	868	868
Maximum Rated VA (Volt-Amp)	915	900	887	880	879	877	876	877
Efficiency ( % )	88.3	89.8	91.1	91.9	92.0	92.1	92.2	92.1
Power Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Leakage Current ( mA )	0.32	0.38	0.40	0.63	0.65	0.69	0.72	0.75
Maximum Inrush Current (A peak )	30							
Maximum Inrush Current duration ( ms )	10							
Maximum British Thermal Unit Rating ( BTU-Hr )	3090	3040	2997	2972	2968	2963	2960	2963

Power Supply Specifications			
Description	HPE 800W Flex -48VDC Hot Plug Power Supply Kit		
Part Number	720480-B21		
Input Voltage Range ( V DC )	-40 to -72		
Frequency Range (Nominal) ( Hz )	DC		
Nominal Input Voltage ( V DC )	-40	-48	-72
Maximum Rated Output Wattage Rating (Watts)	800	800	800
Nominal Input Current ( A DC )	22.0	18.1	11.9
Maximum Rated Input Wattage Rating ( Watts )	882	871	858
Maximum Rated VA (Volt-Amp)	882	871	858
Efficiency ( % )	90.7	91.9	93.2
Power Factor	1.0		
Leakage Current ( mA )	0.0		
Maximum Inrush Current (A peak )	30		
Maximum Inrush Current duration ( ms )	10		
Maximum British Thermal Unit Rating ( BTU-Hr )	3008	2971	2929

To review typical system power ratings use the HPE Power Advisor which is available via the online tool located at

URL: <https://paonline56.itcs.hpe.com/?Page=Index>

**NOTE:** Power Specification and Technical Content for supported power supplies can be found at:

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111541>

## Technical Specifications

### HPE Edgeline EL4000 System

#### Chassis Dimensions (H x W x D)

1U, 23" deep, 17" wide, reversible rackmount with slide rails

#### Weight

**847535-B21: HPE Edgeline EL4000 10GbE 2xSFP+ Switch System** - 17.62 KG (38.85 lbs)

**847534-B21: HPE Edgeline EL4000 4x10GbE 2xQSFP+ Pass Thru System** - 17.20 KG (37.92 lbs) **NOTE:** Configuration used includes 4 server cartridges, 2 power supplies, 4 PCIe I/O cards

#### Power

Typical: 400-600W

Maximum: 800W

#### System Inlet Temperature

**Standard** 10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000ft)  
**Operating** above sea level to a maximum of 3050m (10,000ft), no direct sustained sunlight. Maximum rate of change is 20°C/hr (36°F/hr). The upper limit and rate of change may be limited by the type and number of options installed.

**NOTE:** When configured with certain server models, a fan fault when operating above 30°C (86°F) may reduce system performance. Refer to the appendix for details.

**Extended** Depending on hardware configuration, the supported system inlet range can be extended up to 55°C. Compliance **Operating** to ASHRAE A3 and A4 standards is also available.

**NOTE:** The approved extended temperature hardware configurations for this system are listed in the appendix.

**Non-Operating** -30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).

#### Relative Humidity

**Operating** Minimum to be the higher (more moisture) of -12°C (10.4°F) dew point or 8% relative humidity. Maximum to be the lower (less moisture) of 24°C (75.2°F) dew point or 90% relative humidity

**Non-Operating** 5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.

#### Altitude

**Operating** 3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).

**Non-Operating** 9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min)

Technical Specifications

Acoustic Noise

Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment.Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).

847535-B21: HPE Edgeline EL4000 10GbE 2xSFP+ Switch System

Configured with: HPE ProLiant m510 Server Cartridges

	Idle	
L Wad		6.0 Bels
L pAm		47.0 dB
	Operating	
L Wad		6.6 Bels
L pAm		53.0 dB

Configured with: HPE ProLiant m710x Server Cartridges

	Idle	
L Wad		6.0 Bels
L pAm		46.0 dB
	Operating	
L Wad		6.7 Bels
L pAm		54.5 dB

NOTE: Configuration used includes 4 server cartridges (each configured with 4 DIMMs and 1 SATA M.2) and 2 power supplies.

847534-B21: HPE Edgeline EL4000 4x10GbE 2xQSFP+ Pass Thru System

Configured with: HPE ProLiant m510 Server Cartridges

	Idle	
L Wad		6.5 Bels
L pAm		52.0 dB
	Operating	
L Wad		6.8 Bels
L pAm		55.0 d

Configured with: HPE ProLiant m710x Server Cartridges

	Idle	
L Wad		6.5 Bels
L pAm		52.0 dB
	Operating	
L Wad		6.8 Bels
L pAm		55.0 dB

NOTE: Configuration used includes 4 server cartridges (each configured with 4 DIMMs and 1 SATA M.2) and 2 power supplies.

Emissions Classification (EMC)

FCC Rating

Class A

Normative Standards

CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; K22;K24; EN61000-3-2; EN 61000-3-3; EN 60950-1; IEC60950-1

NOTE: Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.

## Technical Specifications

### Hewlett Packard Enterprise Extended Ambient Operating Temperature Support

The American Society of Heating Refrigeration and Air-Conditioning Engineers set standards for building systems, energy efficiency, indoor air quality, refrigeration and sustainability. The ASHRAE A3 and A4 classes are the latest classes that have been defined in an effort to support the Fresh Air Data cooling initiative. Hewlett Packard Enterprise Extended Ambient Operating Support is defined below as comparable to an ASHRAE class. For selected system configurations the Hewlett Packard Enterprise Edgeline Extended Ambient Operating Support allows operation even beyond ASHRAE class.

**NOTE:** Actual allowable system operating temperature will be determined by the options (I/O cards, drives etc.) selected. Details are provided in the Edgeline system configuration tables for the desired operating environment shown below.

The following table provides a summary of environmental ranges supported, with altitude de-ratings, by Hewlett Packard Enterprise ProLiant servers. Items in bold are ProLiant features that exceed the ASHRAE comparable class feature set.

Extended Ambient Operating Support Specification	Dry bulb temp range (°C)	Relative humidity range (%RH)	Dew point limits (°C)	Maximum altitude	Altitude de-rating
Standard Operating	10°C to 35°C (50°F to 95°F)	8% to 90%	-12°C (min) to 24°C (max)	3050 meters	1.8°C/305m above sea level
Extended Ambient 40°C Operating (ASHRAE Class A3 compliant)	5°C to 40°C (41°F to 104°F)	8% to 90%	-12°C (min) to 24°C (max)	3050 meters	1.0°C/175m above 900m
Extended Ambient 45°C Operating (ASHRAE Class A4 compliant)	5°C to 45°C (41°F to 113°F)	8% to 90%	-12°C (min) to 24°C (max)	3050 meters	1.0°C/125m above 900m
Extended Edgeline Ambient 55°C Operating	0°C to 55°C (32°F to 131°F)	8% to 90%	-12°C (min) to 24°C (max)	3050 meters	1.8°C/305m above sea level

**NOTE:** \*Altitude de-rating assumes no direct sustained sunlight

**NOTE:** The maximum rate of change for Inlet Ambient Temperature is 20°C/hr (36°F/hr). The upper limit and rate of change can be limited by the type and number of options selected.

847535-B21: HPE Edgeline EL4000 10GbE 2xSFP+ Switch System  
 847534-B21: HPE Edgeline EL4000 4x10GbE 2xQSFP+ Pass Thru System  
 847536-B21: HPE Edgeline EL4000 10GbE 2xSFP+ Switch PXIe System

#### Hewlett Packard Enterprise Standard Operating Support (10°C to 35°C)

COMPONENT	SUPPORT STATUS
Base System	Supported
Fans	Supported with Redundancy
SATA M.2	Supported
NVMe M.2	Supported
PCIe I/O Cards	Supported
PXIe I/O Cards	TBA

#### Hewlett Packard Enterprise Extended Ambient 40°C Operating Support (ASHRAE Class A3 compliant)

COMPONENT	SUPPORT STATUS
Base System	Supported
Fans	Supported with Redundancy
SATA M.2	Supported
NVMe M.2	Supported
PCIe I/O Cards	TBA
PXIe I/O Cards	TBA

## Technical Specifications

Hewlett Packard Enterprise Extended Ambient 45°C Operating Support (ASHRAE Class A4 compliant)	
COMPONENT	SUPPORT STATUS
Base System	Supported
Fans	Supported with Redundancy <b>NOTE:</b> Upon fan failure the servers in the system may reduce performance
SATA M.2	Supported
NVMe M.2	Supported
PCIe I/O Cards	TBA
PXIe I/O Cards	TBA

### Hewlett Packard Enterprise Extended Edgeline Ambient 55°C Operating Support

Component	Support Status
Base System	Supported <b>NOTE:</b> Near 55°C inlet ambient AND when the CPU is stressed at 100%, the HPE m510-16c server may reduce performance. There is no impact for other server models.
Fans	Supported with Redundancy <b>NOTE:</b> Upon fan failure the servers in the system may reduce performance
SATA M.2	Supported
NVMe M.2	NOT Supported
PCIe I/O Cards	TBA
PXIe I/O Cards	TBA

### Carrier Grade HPE Edgeline EL4000 System

Carrier-grade servers are designed to meet the specific needs of network equipment providers (NEPs) and independent software vendors (ISVs) that supply fixed and mobile operators. Typically, such servers host network elements, such as media gateways, signaling gateways, media servers, and soft-switches.

Selected configurations of the HPE Edgeline EL4000 System will be certified to a carrier grade level E.g. Network Equipment Building Standards (NEBS) Level 3.

### Environment-friendly Products and Approach End-of-life Management and Recycling

Hewlett Packard Enterprise offers end-of-life Hewlett Packard Enterprise **product return, trade-in, and recycling programs** in many geographic areas. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner. The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the **Hewlett Packard Enterprise web site**. These instructions may be used by recyclers and other WEEE treatment facilities as well as Hewlett Packard Enterprise customers who integrate and re-sell Hewlett Packard Enterprise equipment.

## Summary of Changes

Date	Version History	Action	Description of Change
06-Aug-2018	Version 7	Changed	SKU descriptions in Configuration Information and Additional Options were updated.
04-Dec-2017	Version 6	Updated	Updates throughout the QuickSpecs
25-Sept-2017	Version 5	Changed	Change descriptions on the QuickSpecs
27-Mar-2017	Version 4	Updated	Update Technical specifications, features and configuration information
13-Feb-2017	Version 3	Updated	Update several sections throughout the QuickSpecs
18-Nov-2016	Version 2	Updated	Added more option details. Updated thermal and acoustic specifications. Refreshed rack, PDU and other options.
26-Sep-2016	Version 1	Created	Create QS for HPE Edgeline EL4000 System



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