Overview

HPE ProLiant e910 Server Blade

Are you wanting to move software applications and compute closer to the user? Do you need to reduce moving the vast amounts of data to a centralized data center?

The ProLiant e910 Server Blade allows you to deploy edge compute close to where the data is being generated, conserving uplink bandwidth, connectivity cost, lowering security and corruption risk, improving compliance to data protection laws, and greatly reducing time to actionable insight.

It features a rugged, compact design that is certified for extended thermal environments of 0° to 55° Celsius and is installed in the Size, Weight and Power (SWaP) optimized Edgeline EL8000 Converged Edge System. The ProLiant e910 server blade architecture is based on Intel® Xeon® SP processors to give you increased compute power and speed. The modular design of the HPE ProLiant e910 server blade provides a broad range of configuration choices in networking, storage and I/O for optimizing your unique edge workloads.

Enterprise Data Center Compute Capacities Now Can Be Deployed at The Edge

The ProLiant e910 Server Blade supports industry standard technology leveraging the Intel® Xeon® Scalable Processor Family, and can be configured with fast high-capacity (TB) storage to support enterprise-tier edge workloads. High performance I/O including GPU, FPGA or Networking accelerators, allow it to support the same demanding software applications run in a datacenter or cloud, but now at the edge. The best of HPE's industry standard technologies can now benefit customers at the edge for use cases in telecommunications, defense, law enforcement, disaster response etc.

Seamless Remote Manageability for Deep Edge Environments

The ProLiant e910 Server Blade includes Integrated Lights-Out technology (iLO5) that provides server management capabilities and cutting edge security technologies such as Silicon Root of Trust so you can securely configure, monitor, and update your HPE servers seamlessly and from anywhere.

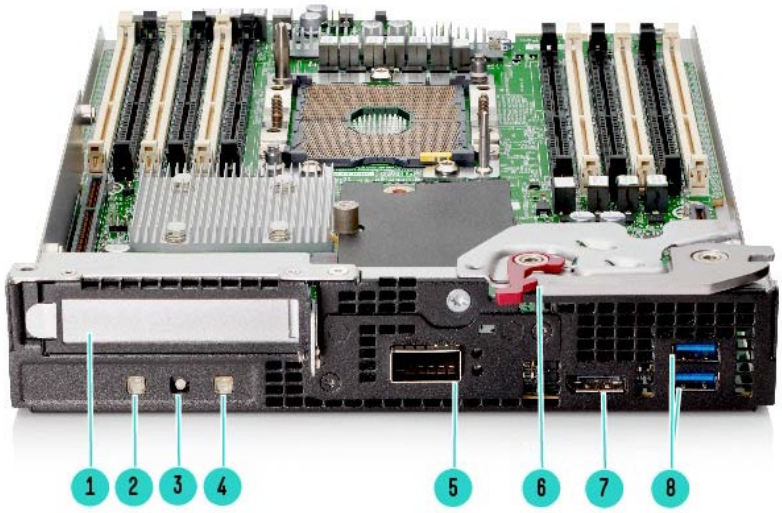
HPE iLO5 simplifies server setup, provides access to server health information, enables server management at scale, and improves server power and thermal control, as well as basic remote administration. The iLO5 Advanced feature provided with each ProLiant e910 blade allows automation of common tasks during each step of the server lifecycle and improved detection and enforcement of security to, increasing ROI and decreasing TCO.

Modular Configurations for Workload Optimization

The ProLiant e910 Server Blade provides the choice of compute density or I/O Expansion which enables you the optimal configuration for your needs.

The Edgeline EL8000 system provides 4 independent 1U slots for configuring either ProLiant e910 1U Server Blades, ProLiant e910 2U Server Blades, or a combination of both. Integrated switch options are available in the chassis for easily creating a cluster-in-a-box across the blades.

Overview



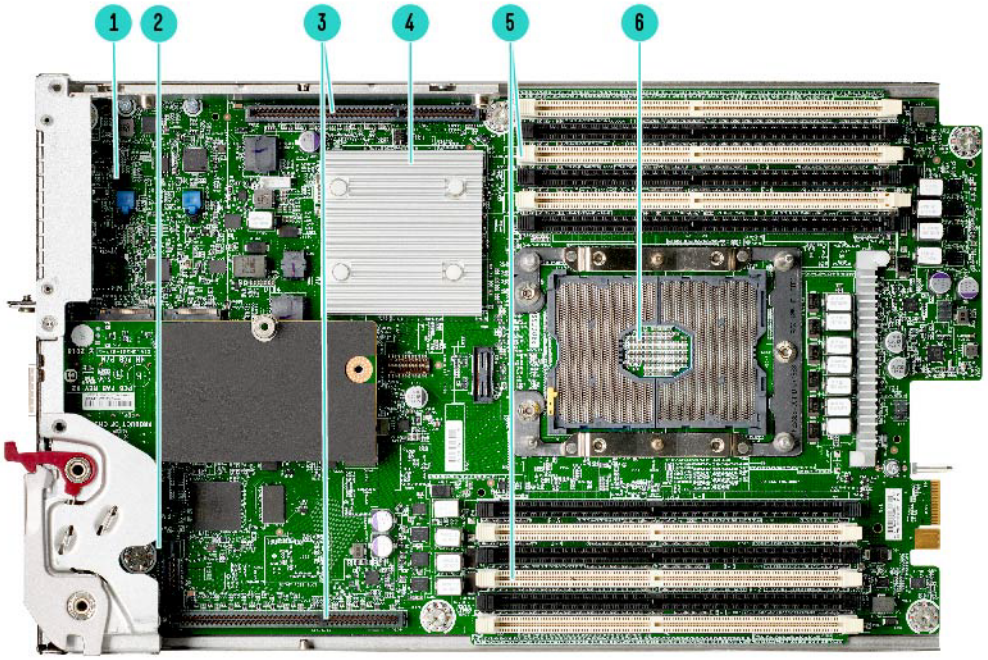
ProLiant e910 1U Server Blade - Front View

Item	Description
1.	Half height, half-length PCIe 3.0 slot (Left Riser)
2.	UID LED and Button
3.	Health LED
4.	Power LED and Button
5.	Network Connection (selectable network riser option)
6.	Release latch
7.	Display port connector
8.	Two (2) USB 3.0 ports

ProLiant e910 2U Blade Server - Front View

Item	Description
1.	Expansion top for additional PCIe slots in the 2U blade
2.	Two (2) Full height, full-length, PCIe slots (Left Riser)
3.	UID LED and Button
4.	Health LED
5.	Power LED and Button
6.	Network Connection (selectable network riser option)
7.	Two (2) Half height, half-length PCIe slots (Right Riser)
8.	Release latch
9.	Display port connector
10.	Two (2) USB 3.0 ports

Overview



ProLiant e910 1U and 2U Blade Server - Interior View

Item	Description	Item	Description
1.	M.2 SSD slots – fits two (2) M.2 2242 or 2280 SSDs	4.	Heatsink (Chipset)
2.	System Battery	5.	Twelve (12) DDR4 DIMM slots
3.	Left and Right PCIe Riser Slot	6.	CPU Socket

Standard Features

Processor

2nd Generation Intel® Xeon® Scalable Processor Family							
Intel® Xeon® SP Processor	**Frequency Ghz**	**Cores**	**L3 Cache MB**	**Power Watts**	**UPI Links**	**DDR4 MHz**	**Max Memory TB**
Platinum 8280L	2.7	28	38.5	205	3	2933	4.5
Platinum 8276	2.2	28	38.5	165	3	2933	1
Gold 6258R	2.7	28	38.5	205	2	2933	1
Gold 6254	3.1	18	24.75	200	3	2933	1
Gold 6252	2.1	24	35.75	150	3	2933	1
Gold 6244	3.6	8	24.75	150	3	2933	1
Gold 6240L	2.6	18	24.75	150	3	2933	4.5
Gold 6238R	2.2	28	38.5	165	2	2933	1
Gold 6230N	2.3	20	27.5	125	3	2933	1
Gold 6230R	2.1	26	35.75	150	2	2933	1
Gold 6212U	2.4	24	35.75	165	n/a	2933	1
Gold 6208U	2.9	16	22	150	n/a	2933	1
Gold 5220R	2.2	24	35.75	150	2	2667	1
Gold 5218R	2.1	20	27.5	125	2	2667	1
Gold 5217	3.0	8	11	115	2	2667	1
Silver 4214	2.2	12	16.5	85	2	2400	1
Silver 4210	2.2	10	13.75	85	2	2400	1
Silver 4210R	3.2	8	11	130	2	2400	1

Notes:

- For more information regarding Intel® Xeon® SP, please see the following URL: **https://www.intel.com/content/www/us/en/products/processors/xeon/scalable.html**
- The ProLiant e910 1U/2U server is only available as a single-socket system, so UPI capability is not used
- Either the Intel Xeon 8280L or the Xeon 6240L processor is required to use the full memory capacity of the ProLiant e910
- The UPI functionality is not available on the Intel Xeon 6212U Processor, as it is single-socket optimized.

Chipset

Intel® C624 Chipset

Notes: For more information regarding chipset, please see the following URL:

https://www.intel.com/content/www/us/en/products/chipsets/server-chipsets/c624.html

Graphics

Integrated Video Standard

- Video modes up to 1920 x 1200@60Hz (32 bpp)
- 16MB Video Memory

HPE iLO 5 system management memory

- 32 MB Flash
- 4 Gbit DDR 3 with ECC protection

On System Management Chipset

HPE iLO 5 ASIC

Notes: Read and learn more in the **iLO QuickSpecs**

Standard Features

Memory

HPE Edgeline DDR4 Registered (RDIMM), Load Reduced (LRDIMM)		
Supported DIMMs	DDR4-2933	
DIMM Slots Available	12	12 DIMM slots per processor, 6 channels per processor, 2 DIMMs per channel
Maximum Capacity (LRDIMM)	1.5 TB	12 x 128GB LRDIMM
Maximum Capacity (LRDIMM)	768 GB	6 x 128GB LRDIMM
Maximum Capacity (LRDIMM)	768 GB	12 x 64GB LRDIMM
Maximum Capacity (RDIMM)	384GB	12 x 32GB RDIMM

Notes:

- Rules under "Memory" section must be followed for Configuring and Mixing of DIMMs.
- Usable system memory is constrained by the configured processor type

Memory Protection

For details on the HPE Server Memory Options RAS feature, visit:
http://www.hpe.com/docs/memory-ras-feature.

Expansion slots

The ProLiant e910 Server Blade I/O Options are configured through the selection of Riser – either a Right side (RR), Left side (LR) or a combination of the two

ProLiant e910 1U					
Slot#	**Slot Form Factor**	**Riser**	**Technology**	**Bus Width**	**Connector Width**
Slot 1 (Standard)	Half-height, half length	LR	PCIe 3.0	X16	X16
Notes: The e910 1U server can be optionally configured with this riser. In addition to the I/O riser, a P12386-B21: HPE ProLiant e910 4-slot NVME M.2 Enablement Kit can also be configured.					
ProLiant e910 2U	Slot Form Factor	Riser	Technology	Bus Width	Connector Width
Slot 1 (Optional)[1]	Full-height, full-length	LR	PCIe 3.0	X8	X16
Slot 2 (Optional)[1]	Full-height, full- length	LR	PCIe 3.0	X8	X16
** OR **					
Slot 1 (Optional)[2]	Full-height, full- length	LR	PCIe 3.0	X16	X16
** AND **					
Slot 3 (Optional)[3]	Half-height, half-length	RR	PCIe 3.0	X8	X16
Slot 4 (Optional)[3]	Half-height, half-length	RR	PCIe 3.0	X8	X16

Notes:

- [1]When e910 2U server is configured with - P12391-B21: HPE ProLiant e910 2U x16/x16 FHFL Left Riser Kit), or P22516-B21: HPE ProLiant e910 2U 2x16 FHFL SE Left Riser Kit (if EL8000 storage bay option is ordered)
- [2]When e910 2U server is configured with - P12388-B21: HPE ProLiant e910 2U x16 FHFL Left Riser Kit, or P22514-B21: HPE ProLiant e910 2U x16 FHFL SE Left Riser Kit (if EL8000 storage bay option is ordered)
- [3]When e910 2U server is configured with - P12389-B21: HPE ProLiant e910 2U x16/x16 HHHL Right Riser Kit. If this slot is configured with P12386-B21: HPE ProLiant e910 4-slot NVME M.2 Enablement Kit, no PCIe I/O slots will be available.

Standard Features

Network

Intel® X722 Quad-port 10GbE (in embedded PCH)

Accessed through the following optional network riser module options, or through optional EL8000 10GbE switch module in chassis:

- P17295-B21: HPE ProLiant e910 2p 1GbE RJ45 Network Riser
- P17296-B21: HPE ProLiant e910 2p 10GbE SFP+ Network Riser
- P12392-B21: HPE ProLiant e910 4x10GbE QSFP+ Module

Intel® I210 1GbE

Accessed through management network port on EL8000 chassis management module

- Dual RJ45
  HPE e910 2p 1GbE RJ45 Mod (P17295-B21)
- Dual SFP+
  HPE e910 2p 10GbE SFP+ Mod (P17296-B21
- QSFP+
  HPE e910 4p 10GbE QSFP+ Mod (P12392-B21)

SATA and PCIe controllers are Integrated in the Intel® Chipset						
SSD Slot #	**Physical Location**	**Technology**	**Bus Width**	**Connector Width**	**Form Factor**	**Supported Sizes**
1	System Board	PCIe-3, NVMe	x1, x2	x1, x2	M.2 2280/22110	960GB 1.92TB 3.84TB
2	System Board	PCIe-3, NVMe	x1, x2	x1, x2	M.2 2280/22110	960GB 1.92TB 3.84TB
3	Expansion Option	PCIe-3, NVMe	x4	x4	M.2 2280/22110	960GB 1.92TB 3.84TB
4	Expansion Option	PCIe-3, NVMe	x4	x4	M.2 2280/22110	960GB 1.92TB 3.84TB
5	Expansion Option	PCIe-3, NVMe	x4	x4	M.2 2280/22110	960GB 1.92TB 3.84TB
6	Expansion Option	PCIe-3, NVMe	x4	x4	M.2 2280/22110	960GB 1.92TB 3.84TB
7	Right Riser (2U Blade)	NVMe	x4	x4	M.2 22110	960GB 1.92TB 3.84TB
8	Right Riser (2U Blade)	NVMe	x4	x4	M.2 22110	960GB 1.92TB 3.84TB

Standard Features

Maximum Internal Storage

- M.2 22110 NVMe solid state device
  - 15.2TB
  - 4x3.8TB

Power Supply

Refer to the Edgeline EL8000 Quick Specs **https://h20195.www2.hpe.com/v2/getdocument.aspx?docname=a00067727enw**

System Fans

Refer to the Edgeline EL8000 Quick Specs **https://h20195.www2.hpe.com/v2/getdocument.aspx?docname=a00067727enw**

Interfaces

- Server Blade Power LED/button
- Server Blade UID LED/button

Operating Systems and Virtualization Software

Support for ProLiant Servers

- **RedHat Enterprise Linux (RHEL)**
- **Windows Server**

Notes:

- Only 64-bit versions of these operating systems are supported
- For more information on the Hewlett Packard Enterprise Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server, please visit our OS Support Site at: **http://www.hpe.com/info/ossupport** and our driver download page which can be found from the HPE Support Center: **http://www.hpe.com/support/hpesc**

Industry Standard Compliance

- PXE Support
- PCIe 3.0 Compliant
- WOL Support
- Microsoft® Logo certifications
- USB 2.0 and 3.0 Support
- ACPI 2.0 Compliant

HPE Server UEFI ROM

Unified Extensible Firmware Interface (UEFI) is an industry standard that provides better manageability and more secured configuration than the legacy ROM while interacting with your server at boot time. The HPE ProLiant e910 Server Blades default to UEFI and does not support Legacy BIOS Boot Mode.

Notes: The UEFI System Utilities function is analogous to the HPE ROM-Based Setup Utility (RBSU) of legacy BIOS. For more information, please visit **http://www.hpe.com/servers/uefi**

UEFI enables numerous new capabilities specific to HPE ProLiant servers such as:

- Secure Boot
- Operating system specific functionality
- Support for > 2.2 TB (using GPT) boot drives
- USB 3.0 Stack
- Embedded UEFI Shell
- Mass Configuration Deployment Tool using RESTful API for iLO 4
- PXE boot support for IPv6 networks
- Boot support for option cards that only support a UEFI option ROM
- Network Stack configurations

Notes: For UEFI Boot Mode, boot environment and OS image installations should be configured properly to support UEFI.

Standard Features

Form Factor

HPE ProLiant e910 Server Blades plug into the HPE Edgeline EL8000 System.

Embedded Management

HPE Integrated Lights-Out Advanced (HPE iLO Advanced)

The ProLiant e910 Server Blades comes with 3 years of iLO Advanced features by default. For more detail on these features:
https://psnow.ext.hpe.com/doc/PSN332279USEN.pdf

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

UEFI

Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI).
Learn more at **http://www.hpe.com/servers/uefi**.

RESTful API

RESTful API for iLO 5 is Redfish 1.0 conformance for simplified server management such as configuration and maintenance tasks based on modern industry standards.
Learn more at **http://www.hpe.com/info/restfulapi**
Notes: Full REST API is available when the server is installed in a HPE Edgeline System

Intelligent Provisioning

Hassle free server and OS provisioning for 1 or few servers with Intelligent Provisioning.
Learn more at **http://www.hpe.com/servers/intelligentprovisioning**

Server Utilities

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.

For more information, see the Edgeline Component Pack Update Guide on the Hewlett Packard Enterprise website:
http://www.hpe.com/info/edgeline-docs
Notes: The Edgeline Component Pack is only supported when the server is installed in a HPE Edgeline System

Scripting Tool Kit and Windows PowerShell

Provision 1 to many servers using your own scripts to discover and deploy them with Scripting Tool Kit (STK) for Windows and Linux or Scripting Tools for Windows PowerShell. **http://www.hpe.com/servers/powershell**.
Notes: This Feature will be available when the server is installed in a HPE Edgeline System.

RESTful Interface Tool

RESTful Interface tool is a scripting tool to provision using RESTful API for iLO5 to discover and deploy servers at scale.
Learn more at **http://www.hpe.com/info/resttool**
Notes: This Feature will be available when the server is installed in a HPE Edgeline System.

Standard Features

Security

- Serial interface control
- Administrator's password
- Power-on password
- TPM2.0
- UEFI
- iLO 5 has 12 customizable user accounts and SSL encryption
- iLO 5 can be disabled via a Global Setting
- iLO Advanced supports directory services integration

HPE Trusted Platform Module

HPE Trusted Platform Module 2.0 is embedded on the Server Blade and can be enabled and disabled using the BIOS.

Notes:

- The TPM (Trusted Platform Module) is a microcontroller chip that can securely store artifacts used to authenticate the server platform. These artifacts can include passwords, certificates and encryption keys. Windows® BitLocker™ Drive Encryption (BitLocker) is a data protection feature available in Windows Server® 2008, 2012/2012 R2. BitLocker leverages the enhanced security capabilities of a Trusted Platform Module (TPM) version 2.0. The TPM works with BitLocker to help protect user data and to ensure that a server running Windows Server has not been tampered with while the system was offline. For more information about TPM, including a white paper, go to: **https://www.hpe.com/h20195/v2/gethtml.aspx?docname=c04939549**
- ProLiant OS pre-installed units will come with the partition required for TPM deployment.
- The TPM key is unique to every TPM deployed server and must be retained. Misplacing or losing the key could result in data loss.

Service and Support

HPE Pointnext - Service and Support

Get the most from your HPE Products. Get the expertise you need at every step of your IT journey with **HPE Pointnext Services**. We help you lower your risks and overall costs using automation and methodologies that have been tested and refined by HPE experts through thousands of deployments globally. HPE Pointnext **Advisory Services**, focus on your business outcomes and goals, partnering with you to design your transformation and build a roadmap tuned to your unique challenges. Our **Professional** and **Operational Services** can be leveraged to speed up time-to-production, boost performance and accelerate your business. HPE Pointnext specializes in flawless and on-time implementation, on-budget execution, and creative configurations that get the most out of software and hardware alike.

Consume IT on your terms

HPE GreenLake brings the cloud experience directly to your apps and data wherever they are—the edge, colocations, or your data center. It delivers cloud services for on-premises IT infrastructure specifically tailored to your most demanding workloads. With a pay-per-use, scalable, point-and-click self-service experience that is managed for you, HPE GreenLake accelerates digital transformation in a distributed, edge-to-cloud world.

- Get faster time to market
- Save on TCO, align costs to business
- Scale quickly, meet unpredictable demand
- Simplify IT operations across your data centers and clouds

Managed services to run your IT operations

HPE GreenLake Management Services provides services that monitor, operate, and optimize your infrastructure and applications, delivered consistently and globally to give you unified control and let you focus on innovation.

Free up resources with Operational Services from HPE Pointnext Services

HPE delivers services for IT by using proven best practices as well as automation and methodologies that have been tested and refined by HPE experts and artificial intelligence through thousands of deployments globally. Choose from the recommended services for customers purchasing from Hewlett Packard Enterprise or an authorized reseller. Services are quoted using Hewlett Packard Enterprise order configuration tools.

HPE Pointnext Tech Care

HPE Pointnext Tech Care is the new operational service experience for HPE products. Tech Care goes beyond traditional support by providing access to product specific experts, an AI driven digital experience, and general technical guidance to not only reduce risk but constantly search for ways to do things better. HPE Pointnext Tech Care has been reimagined from the ground up to support a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Pointnext Tech Care is available in three response levels. Basic, which provides 9x5 business hour availability and a 2 hour response time. Essential which provides a 15 minute response time 24x7 for most enterprise level customers, and Critical which includes a 6 hour repair commitment where available and outage management response for severity 1 incidents.

https://www.hpe.com/services/techcare

HPE Pointnext Complete Care

HPE Pointnext Complete Care is a modular, edge-to-cloud IT environment service that provides a holistic approach to optimizing your entire IT environment and achieving agreed upon IT outcomes and business goals through a personalized and customer-centric experience. All delivered by an assigned team of HPE Pointnext Services experts. HPE Pointnext Complete Care provides:

- A complete coverage approach -- edge to cloud
- An assigned HPE team
- Modular and fully personalized engagement
- Enhanced Incident Management experience with priority access
- Digitally enabled and AI driven customer experience

https://www.hpe.com/services/completecare

Service and Support

Other related services from HPE Pointnext

HPE Installation Service for HPE Edgeline Systems

HPE Installation Service for HPE Edgeline Systems offers hardware installation of your new Edgeline System. It is part of a suite of HPE deployment services that are designed to give you the peace of mind that comes from knowing your HPE products have been installed by Hewlett Packard Enterprise authorized service specialist in accordance with the product's documentation.

https://www.hpe.com/h20195/v2/Getdocument.aspx?docname=a00062322enw

HPE Installation and Startup Service for HPE Edgeline Systems

HPE Installation and Startup of HPE Edgeline Systems delivers installation of your new Edgeline System, installation of one eligible operating system (Windows® or Linux), and the basic configuration of this operating system network parameters to establish network connectivity. This service will assist you in bringing your new HPE Edgeline System into operation and make it remotely accessible in a timely and professional manner.

https://www.hpe.com/h20195/v2/Getdocument.aspx?docname=a00062211enw

HPE Service Credits

Offers flexible services and technical skills to meet your IT demands as your business evolves. With a menu of services, you can access additional resources and specialist skills to help you maintain peak performance of your IT. HPE Service Credits help you proactively respond to your dynamic IT and business needs.

https://www.hpe.com/psnow/doc/4aa4-3393enw

HPE Education Services

Provides comprehensive training designed to expand the skills of your IT staff and keep them up to speed with the latest technologies.

Consult your HPE Sales Representative or Authorized Channel Partner of choice for any additional questions and support options.

Warranty

This product is covered by a global limited warranty and supported by Hewlett Packard Enterprise Services and a worldwide network of HPE Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HPE Pointnext operational 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.

Notes: Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. Warranty repairs may be accomplished through the use of Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Optional CSR parts are designed for easy replacement but may involve added complexity. Customers may choose to have Hewlett Packard Enterprise replace Optional CSR parts at no charge. 2) No CSR parts are also designed for requiring a Hewlett Packard Enterprise authorized service provider replace the part. Additional information regarding worldwide limited warranty and technical support is available at: **https://support.hpe.com/hpsc/wc/public/home**

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.

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.

Service and Support

For more information

- **www.hpe.com/services**
- **https://www.hpe.com/us/en/services/operational.html**

To learn more on HPE Storage Services, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Contact information for a representative in your area can be found at "Contact HPE" **https://www.hpe.com/us/en/contact-hpe.html**

HPE Support Services are sold by HPE and Hewlett Packard Enterprise Authorized Service Partners:

- Services for customers purchasing from HPE or an enterprise reseller are quoted using HPE order configuration tools.
- Customers purchasing from a commercial reseller can find HPE Support Services at **https://ssc.hpe.com/portal/site/ssc/**

Technical Specifications

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

Notes: If you want to configure a server blade only, proceed to Step 2

Step 1: Base Configuration (Choose System)

HPE Edgeline System

HPE Edgeline EL8000 5U Configure-to-order Front Cabling Chassis P12379-B21

Notes:

- Refer to the Edgeline EL8000 documentation for details on how to configure the chassis **https://h20195.www2.hpe.com/v2/getdocument.aspx?docname=a00067727enw**
  - The Edgeline EL8000 chassis can fit a combination of blade options. It includes the Edgeline Chassis Manager (ECM) module.
  - Functional systems require at least 1 power supply to be configured, with 2 power supplies recommended for redundancy
  - Storage Bay and chassis integrated switch options are available. Selecting the Storage Bay option will restrict choice of compute blades.

Step 2: Select ProLiant Server Blade

HPE ProLiant Server Blade

Notes: Min:1, Max:4

HPE ProLiant e910 1U Node Configure-to-order Blade Server P12381-B21

HPE ProLiant e910 2U Node Configure-to-order Blade Server P12382-B21

Notes:

- If the Drive Bay option is selected in the EL8000 chassis, only One (1) e910 2U blade can be ordered. No e910 1U blades are supported in this configuration.
- Each blade operates independently and 1U/2U blades can be mixed in the same EL8000 chassis for a total of 4U height.
- An iLO Advanced license with 3 years of support is provided by default with each e910 blade (1 per blade). This option cannot be de-selected.

HPE iLO Advance Support Upgrade Options

Select support upgrade option that aligns with the selected server and EL8000 HPE Support level.

Table: iLO Advance Support Upgrade SKUs

Step 3: Choose Required Options (per blade)

Processor Option (Min:1, Max:1)

Intel Xeon-Platinum 8280M (2.7GHz/28-core/205W) Processor Kit for HPE ProLiant e910 P12398-B21

Intel Xeon-Gold 6254 (3.1GHz/18-core/200W) FIO Processor Kit for HPE ProLiant e910 P12397-B21

Intel Xeon-Gold 6244 (3.6GHz/8-core/150W) FIO Processor Kit for HPE ProLiant e910 P12396-B21

Intel Xeon-Gold 6230N (2.3GHz/20-core/125W) FIO Processor Kit for HPE ProLiant e910 P17292-B21

Intel Xeon-Gold 6212U (2.4GHz/24-core/165W) Processor Kit for HPE ProLiant e910 P12395-B21

Intel Xeon-Silver 4210 (2.2GHz/10-core/85W) FIO Processor Kit for HPE ProLiant e910 P12399-B21

Intel Xeon-Platinum 8280L (2.7GHz/28-core/205W) Processor Kit for HPE Edgeline P28914-B21

Intel Xeon-Platinum 8276 (2.2GHz/28-core/165W) Processor Kit for HPE Edgeline P25811-B21

Technical Specifications

Intel Xeon-Gold 5217 (3.0GHz/8-core/115W) Processor Kit for HPE Edgeline	P25813-B21
Intel Xeon-Gold 5218R (2.1GHz/20-core/125W) Processor Kit for HPE Edgeline	P28916-B21
Intel Xeon-Gold 5220R (2.2GHz/24-core/150W) Processor Kit for HPE Edgeline	P28917-B21
Intel Xeon-Gold 6208U (2.9GHz/16-core/150W) Processor Kit for HPE Edgeline	P28910-B21
Intel Xeon-Gold 6230R (2.1GHz/26-core/150W) Processor Kit for HPE Edgeline	P28918-B21
Intel Xeon-Gold 6238R (2.2GHz/28-core/165W) Processor Kit for HPE Edgeline	P28919-B21
Intel Xeon-Gold 6240L (2.6GHz/18-core/150W) Processor Kit for HPE Edgeline	P28911-B21
Intel Xeon-Gold 6252 (2.1GHz/24-core/150W) Processor Kit for HPE Edgeline	P28912-B21
Intel Xeon-Gold 6258R (2.7GHz/28-core/205W) Processor Kit for HPE Edgeline	P28920-B21
Intel Xeon-Silver 4210R (2.4GHz/10-core/100W) Processor Kit for HPE Edgeline	P28915-B21
Intel Xeon-Silver 4214 (2.2GHz/12-core/85W) Processor Kit for HPE Edgeline	P28908-B21

Notes:

- The ProLiant e910 1U/2U server is only available as a single-socket system (1 processor per blade).
- Either the Intel Xeon 8280L or the Xeon 6240L processor is required to use the full memory capacity (1.5TB) of the ProLiant e910

Memory Options (Min: 1, Max: 12)

HPE Edgeline 8GB (1x8GB) Single Rank x8 DDR4-2933 CAS-21-21-21 Registered Memory Kit	P12400-B21
HPE Edgeline 16GB (1x16GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Memory Kit	P12401-B21
HPE Edgeline 32GB (1x32GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Memory Kit	P12402-B21
HPE Edgeline 64GB (1x64GB) Quad Rank x4 DDR4-2933 CAS-21-21-21 Load Reduced Memory Kit	P12403-B21

Notes:

- Mixing of RDIMMs and LRDIMMs within the same blade is not allowed
- Mixing of different LRDIMM capacity kits is not allowed (i.e. 64GB & 128GB)
- Ensure that the selected processor supports the configured memory footprint of the blade e.g. Intel Xeon 8280M is required to use the maximum 1.5TB capacity (Twelve 128TB LRDIMMs).

Riser options on ProLiant e910 1U Server Blade

Notes: One left and one right option can be configured simultaneously

Left Riser Options (Min: 0, Max: 1)

HPE ProLiant e910 1U x16 HHHL Left Riser Kit	P12384-B21

Notes: This I/O riser can fit One (1) Half-Height Half-Length (HHHL) I/O card such as a Low-Profile GPU

Right Riser Options (Min: 0, Max: 1)

HPE ProLiant e910 4-slot NVMe M.2 Enablement Kit	P12386-B21

Notes: The M.2 Enablement Kit (P12386-B21) supports Qty4 of M.2 2280 and M.2 22110 SSDs Mixing of 2280 and 22110 SSD Form Factors are allowed

Riser options on ProLiant e910 2U Server Blade

Notes: One left and one right option can be configured simultaneously.

Left Riser Options (Min: 0, Max: 1)

If EL8000 Storage Bay option was NOT selected, pick from these riser options:

HPE ProLiant e910 2U x16/x16 FHFL Left Riser Kit	P12391-B21
HPE ProLiant e910 2U x16 FHFL Left Riser Kit	P12388-B21

Technical Specifications

If EL8000 Storage Bay option IS selected, pick from these riser options:

HPE ProLiant e910 2U x16 FHFL Storage Enablement Left Riser Kit	P22514-B21
HPE ProLiant e910 2U x16/x16 FHFL Storage Enablement Left Riser Kit	P22516-B21

Notes: If the EL8000 storage bay option is selected at the chassis level, the correct e910 2U Left Riser must be configured.

Right Riser Options (Min: 0, Max: 1)

HPE ProLiant e910 2U x16/x16 HHHL Right Riser Kit	P12389-B21
HPE ProLiant e910 4-slot NVMe M.2 Enablement Kit	P12386-B21

Notes:

- This Right Riser supports two (2) PCIe x16 sized I/O slots and two (2) NVMe M.2 SSD slots which can fit 2280 or 22110 sizes
- The M.2 Enablement Kit (P12386-B21) supports four (4) M.2 NVMe SSD slots, which can fit 2280 or 22110 sizes. There are no PCIe I/O add-in card slots available with this riser option.

Solid State Drives

Installed on e910 System Board

HPE Edgeline 960GB NVMe Gen4 Mainstream Performance Mixed Use M.2 22110 Extended Temp PM9A3 SSD	P49021-B21
HPE Edgeline 1.92TB NVMe Gen4 Mainstream Performance Mixed Use M.2 22110 Extended Temp PM9A3 SSD	P49023-B21
HPE Edgeline 3.84TB NVMe Gen4 Mainstream Performance Mixed Use M.2 22110 Extended Temp PM9A3 SSD	P49025-B21

Notes:

- Min: 0, Max: 4

Installed on Right Riser

HPE Edgeline 960GB NVMe Gen4 Mainstream Performance Mixed Use M.2 22110 Extended Temp PM9A3 SSD	P49021-B21
HPE Edgeline 1.92TB NVMe Gen4 Mainstream Performance Mixed Use M.2 22110 Extended Temp PM9A3 SSD	P49023-B21
HPE Edgeline 3.84TB NVMe Gen4 Mainstream Performance Mixed Use M.2 22110 Extended Temp PM9A3 SSD	P49025-B21

Notes:

- Min: 0, Max: 2 or 4 - depending on riser type
- The P12389-B21: HHHL Right Riser Kit provides 2 M.2 slots that can fit 2280 and 22110 SSDs. Only NVMe SSDs are supported.
- The P12386-B21: HPE e910 4 Slot NVMe M.2 Enablement Kit provides 4 M.2 slots that can fit 2280 and 22110 SSDs. Only NVMe SSDs are supported.

Network Riser Kits

HPE ProLiant e910 4x10GbE QSFP+ Module	P12392-B21
HPE ProLiant e910 2-port 1GbE RJ45 Module	P17295-B21
HPE ProLiant e910 2-port 10GbE SFP+ Module	P17296-B21

Technical Specifications

Notes:

- Min: 1, Max: 1
- The network riser connects the embedded Intel X722 quad-port 10GbE NIC on each e910 blade to either the blade faceplate, chassis switch bay or both.
- The QSFP+ network riser option will not connect any embedded 10GbE ports to the chassis switch bays. All 4 10GbE ports are presented on the faceplate of the respective blade.
- The RJ45 and SFP+ network riser modules connect 2 10GbE ports to the blade faceplate, and 1 10GbE port to each of the chassis switch bays (2 total). If an EL8000 chassis switch is ordered, you must select one of these modules.

Step 4: Choose Additional Options

Choose additional options for Factory Integration from sections below

PCIe Slot Options

Ensure that the riser type configured in the e910 blade can fit the selected PCIe add-in card option

Networking

HPE Ethernet 10Gb 2-port SFP+ X710-DA2 Adapter	727055-B21
HPE Ethernet 1Gb 4-port BASE-T I350-T4V2 Adapter	811546-B21
HPE Ethernet 10/25Gb 2-port SFP28 MCX4121A-ACUT Adapter	817753-B21
HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	872726-H21
Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card	P26966-B21

Notes: If the Pensando DSP DSC-25 (P26966-B21) is selected, an accompanying RTU license must be orderec

Accelerators and associated accessories

NVIDIA T4 16GB Computational Accelerator for HPE	R0W29A
HPE ProLiant e910 300W GPU Power Enablement Kit	P12383-B21

Notes: This kit provides a GPU power board for the e910 2U blade and must be selected when the NVIDIA Tesla V100S 32GB (R4D73A) or the NVIDIA Quadro RTX 6000 (R0Z45A) is configured. The e910 1U blade only supports Tesla T4 GPUs and does not need the kit.

HPE ProLiant e910 CPU 8-pin Cable Kit	P12393-B21

Notes: This cable must be selected when HPE NVIDIA Tesla V100S-32GB (R4D73A) is selected

HPE ProLiant e910 PCIe Y-cable 8-pin/6-pin Cable Kit	P17291-B21

Notes: This cable must be selected when HPE NVIDIA Quadro RTX6000 GPU Module (R0Z45A) is selected.

HPE ProLiant e910 CPU 8-pin Cable Kit	P12393-B21

Notes: This cable must be selected when HPE NVIDIA A100 40GB (R6B53A) is selected.

Supported Cables

Notes: Optional cables for connection to either the QSFP+/SFP+/RJ45 network riser ports on the blade faceplate, or thee SFP+ ports on the EL8000 chassis network switch

HPE Edgeline 1/10Gb SFP+ SR 400m Transceiver	P44258-B21
HPE Edgeline 10/25Gb SFP28 SR 100m Transceiver	P44259-B21
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

Technical Specifications

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 BladeSystem c-Class 10Gb SFP+ SR Transceiver	455883-B21
Aruba 1G SFP RJ45 T 100m Cat5e Transceiver	J8177D
HPE FlexNetwork X240 10G SFP+ to SFP+ 1.2m Direct Attach Copper Cable	JD096C
HPE BladeSystem c-Class 10GbE SFP+ to SFP+ 3m Direct Attach Copper Cable	487655-B21

OS Boot Device

HPE NS204i-p x2 Lanes NVMe PCIe3 x8 OS Boot Device	P12965-B21

Physical Dimensions

Server Cartridge

- **Dimensions (H x W x D)**
  1.60 x 8.39 x14.3in (4.05 x 21.30 x 36.3cm) – e910 1U blade
  3.28 x 8.39 x 14.3in (8.33 x 21.30 x 34.93cm) – e910 2U blade
- **Typical Power**
  300W per e910 1U
- **Max Power**
  400W per e910 1U

System Inlet Temperature

- **Extended Operating**
  HPE Edgeline EL8000 with ProLiant e910 Server Blades: Depending on hardware configuration, the supported system inlet range can be extended up to 55°C. Compliance to ASHRAE A3 and A4 standards is also available. The approved hardware configurations for this system are listed in the Edgeline system documentation.
- **Standard Operating**
  HPE Edgeline EL8000 Chassis with ProLiant e910 Server Blades: Typical range is 10° to 35°C (50° to 95°F) with altitude derating.

Emissions Classification (EMC)

- **FCC Rating**
  - Class A
- **Normative Standards**
  - CISPR 22;
  - EN55022;
  - EN55024;
  - FCC CFR 47, Pt 15;
  - ICES-003;
  - CNS13438;
  - K22;
  - K24;
  - EN 61000-3-2;
  - EN 61000-3-3;
  - EN 60950-1;
  - EC 60950-1

Notes: 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

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

Hewlett Packard Enterprise offers end-of-life **product return, trade-in, and recycling programs**, in many geographic areas, for our products. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE Directive (2012/19/EU) 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 OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.

Appendix

Accelerator Ambient Temp Matrix					
	e910-1U	**e910-2U**			
Slot	Slot 1	Slot 1	Slot 2	Slot 3	Slot 4
Nvidia Tesla V100S	N/A	ASHRAE A4/55C		N/A	N/A
Nvidia RTX 6000	N/A	ASHRAE A4/55C		N/A	N/A
Nvidia Tesla T4	ASHRAE A4/55C	ASHRAE A4/55C	ASHRAE A4/55C	ASHRAE A4/55C	ASHRAE A4/55C
NVIDIA A100	N/A	ASHRAE A4/55C	N/A	N/A	N/A

Summary of Changes

Date	Version History	Action	Description of Change
05-Jun-2023	Version 19	Changed	Standard Features and Configuration Information sections were updated. GPU and Storage.
05-Jul-2022	Version 18	Changed	Standard Features section was updated.
13-Dec-2021	Version 17	Changed	Additional Options section was updated
04-Oct-2021	Version 16	Changed	Additional Options section was updated Service and Support Pointnext Tech Care and Complete Care information updated
07-Sep-2021	Version 15	Changed	Standard Features, Configuration Information and Additional Options sections were updated Service and Support Pointnext Tech Care information added Obsolete SKU was removed
02-Aug-2021	Version 14	Changed	Services and Support and Configuration Information sections were updated
10-May-2021	Version 13	Changed	Standard Features, Configuration Information and Additional Options sections were updated. Obsolete SKU was removed
15-Mar-2021	Version 12	Changed	Standard Features, Configuration Information, Additional Options and Technical Specifications sections were updated
03-Aug-2020	Version 11	Changed	Standard Features section was updated.
01-Jun-2020	Version 10	Changed	Overview, Standard Features, Configuration Information, and Additional Options sections were updated.
04-May-2020	Version 9	Changed	Overview, Standard Features, Configuration Information and Additional Options sections were updated.
17-Feb-2020	Version 8	Changed	Standard Features, Configuration Information, and Additional Options, sections were updated.
03-Feb-2020	Version 7	Changed	Overview, Standard Features, Configuration Information and Additional Options sections were updated.
06-Jan-2020	Version 6	Changed	Overview, Standard Features, Configuration Information and Additional Options sections were updated.
02-Dec-2019	Version 5	Changed	Configuration Information, Additional Options, and Technical Specifications sections were updated.
21-Oct-2019	Version 4	Changed	SKUs descriptions updated in Configuration Information section.
07-Oct-2019	Version 3	Changed	QuickSpecs was updated.
16-Sep-2019	Version 2	Changed	Overview and Standard Features sections were updated.
05-Aug-2019	Version 1	New	New QuickSpecs

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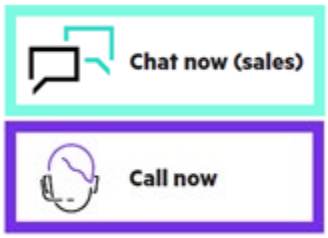

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For hard drives, 1GB = 1 billion bytes. Actual formatted capacity is less.

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