

### 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.

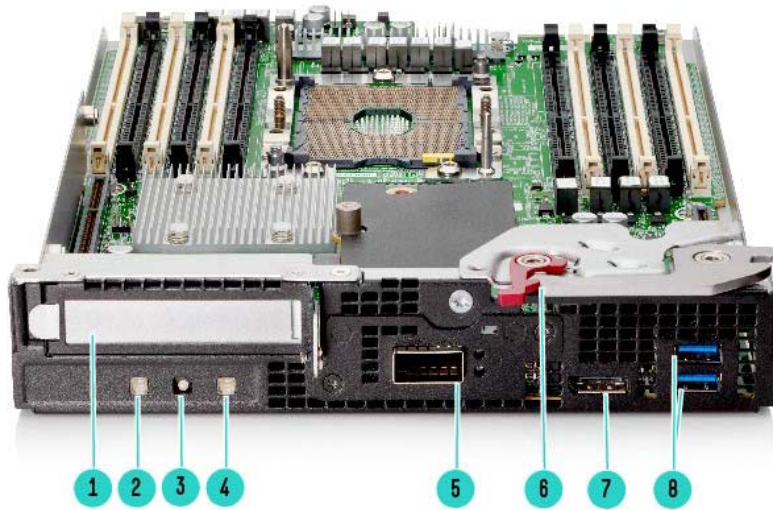
##### **Modular Configurations for Workload Optimization**

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.

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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

**Item Description**

- 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**

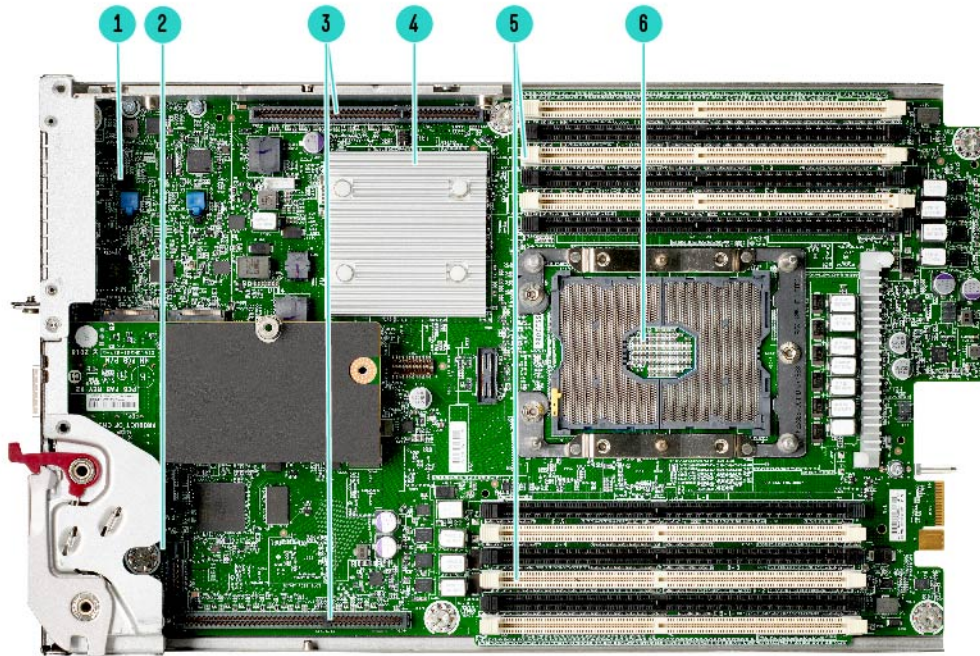
- 1. Expansion top for additional PCIe slots in the 2U blade
- 2. Two (2) Full height, full-length, PCIe slots (Left Riser)
- 3. UID LED and Button
- 4. Health LED
- 5. Power LED and Button

**Item Description**

- 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	Frequency	Cores	L3 Cache	Power	UPI	DDR4 MHz	Max Memory
Platinum 8280M Processor	2.7Ghz	28	38.5	205W	3 UPI links	2933MT/s	2TB
Gold 6254 Processor	3.1Ghz	18	24.75	200W	3 UPI links	2933MT/s	1TB
Gold 6244 Processor	3.6Ghz	8	24.75	150W	3 UPI Links	2933MT/s	1TB
Gold 6230N Processor	2.3Ghz	20	27.5	125W	3 UPI links	2933MT/s	1TB
Gold 6212U Processor	2.4GHz	24	35.75	165W	n/a	2933MT/s	1TB
Silver 4210 Processor	2.2Ghz	10	13.75	85W	2 UPI links	2400MT/s	1TB

#### 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
- At least an Intel Xeon 8280M 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

Type	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
<b>Notes:</b> 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#	Slot Form Factor	Riser	Technology	Bus Width	Connector Width
Slot 1 (Optional) <sup>1</sup>	Full-height, full-length	LR	PCIe 3.0	X8	X16
Slot 2 (Optional) <sup>1</sup>	Full-height, full-length	LR	PCIe 3.0	X8	X16
<b>** OR **</b>					
Slot 1 (Optional) <sup>2</sup>	Full-height, full-length	LR	PCIe 3.0	X16	X16
<b>** AND **</b>					
Slot 3 (Optional) <sup>3</sup>	Half-height, half-length	RR	PCIe 3.0	X8	X16
Slot 4 (Optional) <sup>3</sup>	Half-height, half-length	RR	PCIe 3.0	X8	X16

#### Notes:

- <sup>1</sup>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)
- <sup>2</sup>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)
- <sup>3</sup>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.



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## 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 10GbE 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)

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## Standard Features

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	SATA-3, PCIe-3	x1, x2	x1, x2	M.2 2242/2280	120GB 240GB 256GB 512GB 1TB 2.048TB
2	System Board	SATA-3, PCIe-3	x1, x2	x1, x2	M.2 2242/2280	120GB 240GB 256GB 512GB 1TB 2.048TB
3	Expansion Option	PCIe-3, NVMe	x4	x4	M.2 2280/22110	256GB 512GB 1TB 2.048TB 960GB 1.92TB 3.84TB
4	Expansion Option	PCIe-3, NVMe	x4	x4	M.2 2280/22110	256GB 512GB 1TB 2.048TB 960GB 1.92TB 3.84TB
5	Expansion Option	PCIe-3, NVMe	x4	x4	M.2 2280/22110	256GB 512GB 1TB 2.048TB 960GB 1.92TB 3.84TB
6	Expansion Option	PCIe-3, NVMe	x4	x4	M.2 2280/22110	256GB 512GB 1TB 2.048TB 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



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## Standard Features

### Maximum Internal Storage

- M.2 2242 SATA solid state device
    - 480GB
    - 2x 240 GB
  - M.2 2280 NVMe solid state devices
    - 16.4TB
    - 8x 2TB
  - M.2 22110 NVMe solid state device
    - 23.0TB
    - 6x3.8TB
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### Power Supply

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

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### System Fans

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

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### Interfaces

- Server Blade Power LED/button
  - Server Blade UID LED/button
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## Operating Systems and Virtualization Software

### Support for ProLiant Servers

- **RedHat Enterprise Linux (RHEL) v7.6 and v8.0**
- **Windows Server 2016 and 2019**

#### 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.hp.com/info/ossupport> and our driver download page which can be found from the HPE Support Center: <http://www.hp.com/support/hpesc>
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### 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
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## Standard Features

### 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.

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### Form Factor

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

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### Embedded Management

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

The ProLiant e910 Server Blades come with iLO Advanced features when the BD505A SKU is attached to the blade. 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>

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## Standard Features

### 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. Learn more at <http://www.hpe.com/servers/proliant/stk>

Or <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.

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### 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

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### 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.
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## Service and Support

### Achieve maximum return from your IT investment

Get the expertise you need at every step of your IT journey with **HPE Pointnext services and support**. We help you lower your risks and costs using proven best practices, automation and methodologies that have been tested and refined by Hewlett Packard Enterprise experts through thousands of deployments globally. With **Advisory Services**, we 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.

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### Consume IT on your terms

**HPE GreenLake Flex Capacity** combines the simplicity, agility, and economics of public cloud with the security and performance benefits of on-premises IT. You determine your own “Right Mix” of Hybrid IT and workload placement without having to use.

With its agile pay-per-use service, HPE GreenLake Flex Capacity can help your IT organization:

- Avoid IT expenses stemming from overprovisioning
  - Improve time to market by maintaining a safe buffer of capacity, ready for use when you need it
  - Keep capacity ahead of demand with regular monitoring—and a simple change order to replenish
  - Pay for only the capacity used, not the capacity deployed
  - Reduce IT risk with tailored support
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### Connect your devices

Unlock all of the benefits of your technology investment by connecting your products to Hewlett Packard Enterprise. Reduce down time, increase diagnostic accuracy and have a single consolidated view of your environment. By connecting, you will receive 24x7 monitoring, pre-failure alerts, automatic call logging, and automatic parts dispatch. HPE Proactive Care Service and HPE Datacenter Care Service customers will also benefit from proactive activities to help prevent issues and increase optimization. All of these benefits are already available to you with your server storage and networking products, securely connected to HPE support. Learn more about getting connected at <http://www.hpe.com/services/getconnected>

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### Free up resources with Operational Services from HPE Pointnext

Choose from the recommended services for customers purchasing from Hewlett Packard Enterprise or an authorized reseller are quoted using Hewlett Packard Enterprise order configuration tools.

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### HPE Datacenter Care

Helps customers to address the pressing needs of IT today and smoothly transform to a more agile cloud-like IT operations model. We help run and monitor your IT by offloading the day to day routine tasks, helping customers be more predictive and proactive, and saving time with one place to call with for all of their IT. Datacenter Care is available as both tailored statement of work and as a packaged service for 3, 4, and 5 year terms.

Partner with an assigned account team backed by local and global experts, access HPE enhanced call experience with priority access, use specialized support for complex, technologies, choose hardware and software support for your devices, implement proactive monitoring to stay ahead of issues, and access HPE IT best practices and IP. HPE Datacenter Care advantage options are available to add to your agreement to give you specialized expertise for performance, security, back up analysis, and much more.

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## Service and Support

### **HPE Proactive Care**

Gives customers an enhanced call experience. When your products are connected to HPE, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice.

HPE Proactive Care is available in 3, 4 and 5 year terms with a choice of response levels: Next Business day (NBD), 24x7 with a 4 hour response, and 24x7 with 6 hour call to repair (CTR). This Service combines both reactive support when there is a problem with an enhanced call experience and start to finish case management with proactive reporting and advice. This service also includes collaborative software support for Independent Software Vendors (ISVs), (Red Hat, VMWare, Microsoft, etc.).

<https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf>

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### **HPE Proactive Care Advanced**

Incorporates all the deliverables of HPE Proactive Care plus includes personalized support from a local, assigned Account Support Manager who will share best practice advice and personalized recommendations designed to help improve availability and performance to help increase stability and reduce unplanned downtime. Leverage your system's ability to connect to HPE for pre-failure alerts, automatic call logging and parts dispatch. For business critical incidents, Proactive Care Advanced offers critical event management to help reduce mean time to resolution. HPE Service Credits are included to redeem for technical and operational services. HPE Proactive Care Advanced is offered in 3, 4, and 5 year terms with a choice of response levels: Next Business day (NBD), 24x7 with a 4 hour response, and 24x7 with 6 hour call to repair (CTR).

<https://www.hpe.com/h20195/v2/getdocument.aspx?docname=4AA5-3259ENW>

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### **HPE Foundation Care**

**Notes:** Choose the response level that meets your needs

HPE Foundation Care helps when there is a problem and is available in 3, 4, and 5 year terms with a choice of response levels: Next Business day (NBD), 24x7 with a 4 hour response, and 24x7 with 6 hour call to repair (CTR). Note that Call-To-Repair Service connects you to HPE 24 hours a day, seven days a week for assistance on resolving issues -this includes our highest level commitment to repair hardware within six hours after opening your case and respond to software questions within two hours. In addition, Collaborative software support is included and provides troubleshooting assistance on industry leading software running on your server. Simplify your support experience and make HPE your first call to help resolve hardware or software problems.

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

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## **Other related services from HPE Pointnext**

### **HPE Server Hardware Installation**

Provides for the basic 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**

Provides for the installation of your new Edgeline System. 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. The HPE service delivery technician will connect the product to the network as appropriate and enable remote support to allow for automatic case creation for hardware failures. Installation and start up services also includes the installation of one supported operating system type (Windows® or Linux). <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.



## Service and Support

### 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.

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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 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: <http://h20564.www2.hp.com/hpsc/wc/public/home>

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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.

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 quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

Defective Media Retention is an option available with HPE Datacenter Care, HPE Proactive Care, Proactive Care Advanced, and HPE Foundation Care and applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction.

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## Configuration Information

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.

HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features

BD505A

**Notes:** An iLO Advanced license is automatically configured with each e910 blade (1 per blade) and will be installed in the factory. This option cannot be de-selected.

### Step 3: Choose Required Options (per blade)

#### Processor Option

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

#### Notes:

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



## Configuration Information

### Memory Options

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
HPE Edgeline 128GB (1x128GB) Octal Rank x4 DDR4-2933 CAS-21-21-21 Load Reduced Memory Kit	P12404-B21

#### Notes:

- Min:1, Max:12
- 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

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

- Min:0, Max:1
- 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
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#### Notes:

- Min:0, Max:1
- 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

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

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:

- Min: 0, Max: 1
- If the EL8000 storage bay option is selected at the chassis level, the correct e910 2U Left Riser must be configured.



## Configuration Information

### Right Riser Options

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:

- Min: 0, Max: 1
- 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 120GB SATA M.2 2242 Solid State Drive Field Upgradable Kit	866842-B21
HPE 240GB SATA M.2 2242 Solid State Drive Field Upgradable Kit	866844-B21
HPE 256GB NVMe x4 Lanes Read Intensive M.2 2280 1yr Wty Extended Temperature SSD	880262-B21
HPE 512GB NVMe x4 Lanes Read Intensive M.2 2280 1yr Wty Extended Temperature SSD	880264-B21
HPE 1TB NVMe x4 Lanes Read Intensive M.2 2280 1yr Wty Extended Temperature SSD	880266-B21
HPE Edgeline 2TB NVMe x4 Lanes Read Intensive M.2 2280 1yr Wty Extended Temperature SSD	P00375-B21

#### Notes:

- Min: 0, Max: 2
- The system board has two (2) M.2 slots which can accept SATA or NVMe SSDs limited to 2242 or 2280 sizes. These slots do not support 22110 size SSDs.

#### Installed on Right Riser

HPE 256GB NVMe x4 Lanes Read Intensive M.2 2280 1yr Wty Extended Temperature SSD	880262-B21
HPE 512GB NVMe x4 Lanes Read Intensive M.2 2280 1yr Wty Extended Temperature SSD	880264-B21
HPE 1TB NVMe x4 Lanes Read Intensive M.2 2280 1yr Wty Extended Temperature SSD	880266-B21
HPE Edgeline 2TB NVMe x4 Lanes Read Intensive M.2 2280 1yr Wty Extended Temperature SSD	P00375-B21
HPE Edgeline 960GB NVMe x4 Lanes Mixed Use M.2 22110 3yr Wty Extended Temperature SSD	P05892-B21
HPE Edgeline 1.92TB NVMe x4 Lanes Mixed Use M.2 22110 3yr Wty Extended Temperature SSD	P05896-B21
HPE Edgeline 3.84TB NVMe x4 Lanes Mixed Use M.2 22110 3yr Wty Extended Temperature SSD	P05900-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.





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## Configuration Information

### 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

#### 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

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## Additional Options

### 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 562SFP+ Adapter	727055-B21
HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	764284-B21
HPE Ethernet 1Gb 4-port 366T Adapter	811546-B21
HPE Ethernet 10/25Gb 2-port 640SFP28 Adapter	817753-B21
HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	872726-H21

### Accelerators and associated accessories

HPE NVIDIA Tesla T4 16GB Computational Accelerator	ROW29A
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 ANY GPU (except the Tesla T4) or FPGA is configured. The e910 1U blade only supports Tesla T4 GPUs and does not need the kit.

Intel Stratix 10 SX FPGA Accelerator	ROX82A
HPE ProLiant e910 PCIe 8-pin Cable Kit	P12405-B21

**Notes:** This cable must be selected when Intel Stratix 10 SX FPGA Accelerator (ROX82A) is selected

HPE NVIDIA Tesla V100 PCIe 32GB Computational Accelerator	Q9U36A
HPE ProLiant e910 CPU 8-pin Cable Kit	P12393-B21

**Notes:** This cable must be selected when HPE NVIDIA Tesla V100-32GB PCIE Module (Q9U36A) is selected the GPU is chosen.

HPE NVIDIA Quadro RTX 6000 Graphics Accelerator	ROZ45A
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 (ROZ45A) is selected.

### Supported Cables

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

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 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

## Technical Specifications

### Physical Dimensions

#### Server Cartridge

- **Dimensions (H x W x D)**  
6.57 x 7.23 x 0.78in (16.71 x 18.37 x 1.98cm)
- **Typical Power**  
300W per U
- **Max Power**  
400W per U

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### 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.

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### 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.

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### 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.

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## Technical Specifications

### Appendix

Accelerator Ambient Temp Matrix					
	e910-1U	e910-2U			
	Slot 1	Slot 1	Slot 2	Slot 3	Slot 4
<b>Nvidia Tesla V100</b>	N/A	ASHRAE A4/55C		N/A	N/A
<b>Nvidia RTX 6000</b>	N/A	ASHRAE A4/55C		N/A	N/A
<b>Intel Stratix 10</b>	N/A	ASHRAE A3/40C		N/A	N/A
<b>Nvidia Tesla T4</b>	ASHRAE A4/55C	ASHRAE A4/55C	ASHRAE A4/55C	ASHRAE A4/55C	ASHRAE A4/55C



## Summary of Changes

Date	Version History	Action	Description of Change
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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