## 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.

**Hewlett Packard Enterprise**

## Overview
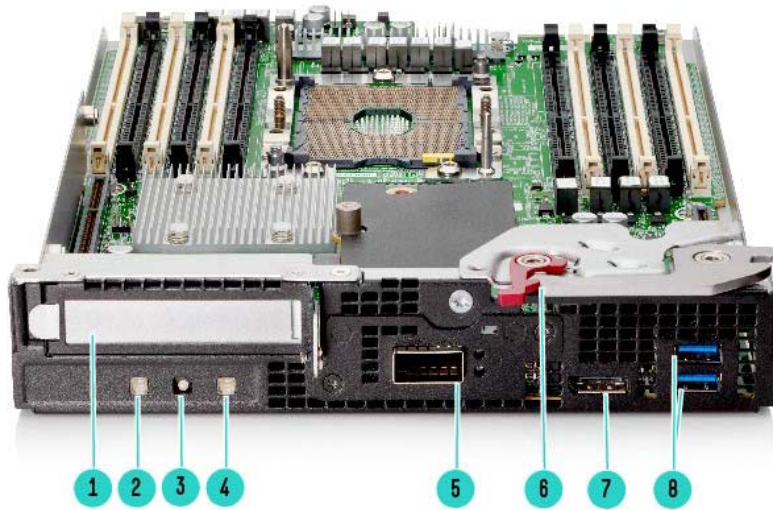


**ProLiant e910 1U Server Blade - Front View**

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



**ProLiant e910 2U Blade Server - Front View**

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

## Overview
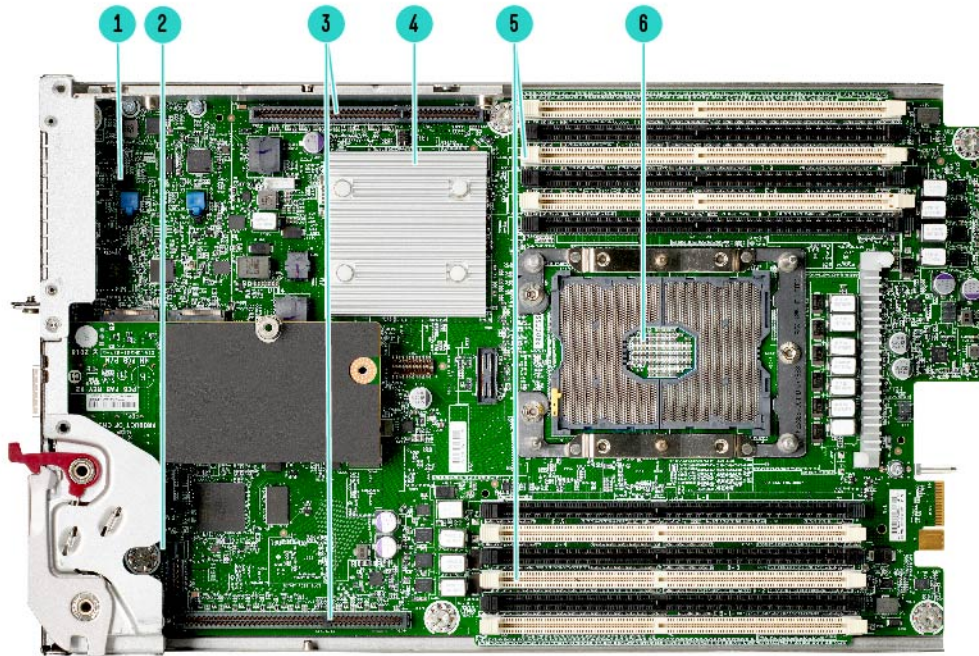


**ProLiant e910 1U and 2U Blade Server - Interior View**

| 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 8280 | 2.7 | 28 | 38.5 | 205 | 3 | 2933 | 2 |
| Platinum 8280L | 2.7 | 28 | 38.5 | 205 | 3 | 2933 | 4.5 |
| 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
- 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

| 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 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)

## 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 |

## 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

### 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) 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.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

## 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.

### 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 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**

## 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. **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.

### 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

### 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.

### 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

### 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 24x7monitoring, 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**

### 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.

### 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.

## 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**

### 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**

### HPE Foundation Care
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**
**Notes:** Choose the response level that meets your needs

### 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.

### 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.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 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.

## 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:**

&mdash; Refer to the Edgeline EL8000 documentation for details on how to configure the chassis
**https://h20195.www2.hpe.com/v2/getdocument.aspx?docname=a00067727enw**
  - o The Edgeline EL8000 chassis can fit a combination of blade options. It includes the Edgeline Chassis Manager (ECM) module.
  - o Functional systems require at least 1 power supply to be configured, with 2 power supplies recommended for redundancy
  - o 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:**

&mdash; 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.
&mdash; 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:**

&mdash; Min:1, Max:1
&mdash; The ProLiant e910 1U/2U server is only available as a single-socket system (1 processor per blade).
&mdash; 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 |

**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 |

**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.

## 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

## 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 SFP+ X710-DA2 Adapter | 727055-B21 |
| HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter | 764284-B21 |
| HPE Ethernet 1Gb 4-port BASE-T I350-T4V2 Adapter | 811546-B21 |
| HPE Ethernet 10/25Gb 2-port SFP28 CX4121B Adapter | 817753-B21 |
| HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter | 872726-H21 |

### Accelerators and associated accessories

| | |
|---|---|
| NVIDIA Tesla 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 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 for HPE | R0X82A |
| HPE ProLiant e910 PCIe 8-pin Cable Kit | P12405-B21 |

**Notes:** This cable must be selected when Intel Stratix 10 SX FPGA Accelerator (R0X82A) is selected

| | |
|---|---|
| NVIDIA Tesla V100 PCIe 32GB Computational Accelerator for HPE | 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.

| | |
|---|---|
| NVIDIA Quadro RTX 6000 Graphics Accelerator for HPE | R0Z45A |
| 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.

### 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 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

### 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.

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

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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** |
| **Nvidia Tesla V100** | N/A | ASHRAE A4/55C | | N/A | N/A |
| **Nvidia RTX 6000** | N/A | ASHRAE A4/55C | | N/A | N/A |
| **Intel Stratix 10** | N/A | ASHRAE A3/40C | | N/A | N/A |
| **Nvidia Tesla T4** | 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 |
|---|---|---|---|
| 03-Aug-2020 | Version 11 | Changed | Standard Features sections 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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